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TIMES

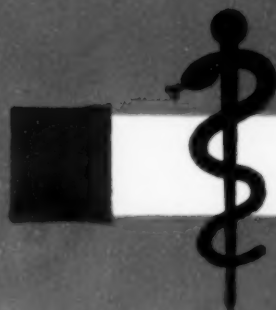
THE JOURNAL OF GENERAL PRACTICE

Early Hypertension
Treatment of Leukemia
Obstetrics in Rural Practice
Rectal Pain
Health Insurance Comes of Age
Dermatalgia
Acne Vulgaris
Thermal Burns
Periarteritis Nodosa
Diagnosis of Growth Failure (Refresher)
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Contents Pages 5a, 7a, 9a

NO. 3

MARCH 1957

VOL. 85



Against Pathogen & Pain in urinary tract infections

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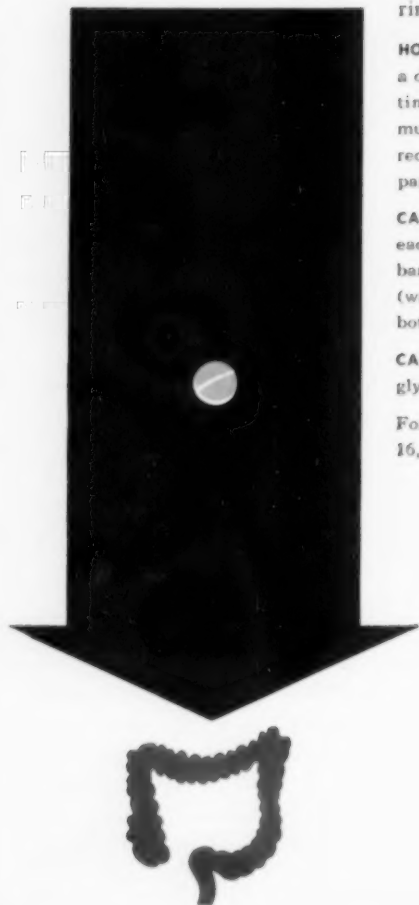
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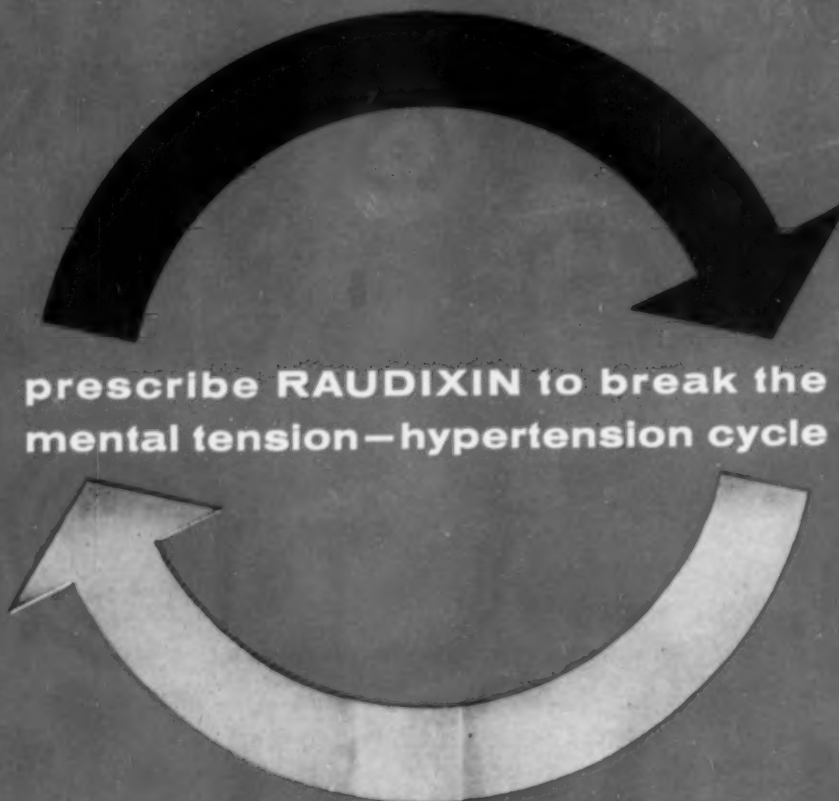
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1. Carey, L. S.: Delaware M. J. 21:229 (Oct.) 1949.

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C I B A
SUMMIT, N. J.



Off the Record

True Stories From Our Readers

Each incident described has been contributed by one of our readers. Contributions describing actual and unusual happenings in your practice are welcome. For obvious reasons only your initials will be published. An imported German apothecary jar will be sent in appreciation for each accepted contribution.

Surprise Package

He was 21; she was 18. They came to my office to have their blood taken for marriage. They were very excited and happy. She was round and fat. The blood was taken. They made their plans.

Two weeks later, while they were out riding, she had a terrific pain in her abdomen. It was about 9 p.m. He telephoned and asked if they could please come right over diagnosing the girl's trouble as an acute appendicitis. She was brought into the office, and a quick examination revealed a full-term pregnancy; labor had started.

A few hours later the acute appendix had two arms and two legs. This came as a complete surprise to *both of them*.

P.S. He was *not* the father.

H.L.B., M.D.
Lynn, Mass.

It's a Tough Language

During the war years, some of the smaller drug stores were short on many items, and I cautioned the Patient that she had better have her prescription

filled at one of the larger stores downtown for this reason. A few days later she said, "You sure were right; I had to come back to town to the apothecary to get the medicine."

G. G., M.D.
Birmingham, Ala.

They Grow Like Weeds

In my first year of practice, I was asked to assist a general surgeon in all of his operations. While we had separate offices, the "chief" would frequently send me to homes to change dressings, remove sutures and on any other calls which he was unable to do for lack of time, including medical cases of any and all kinds.

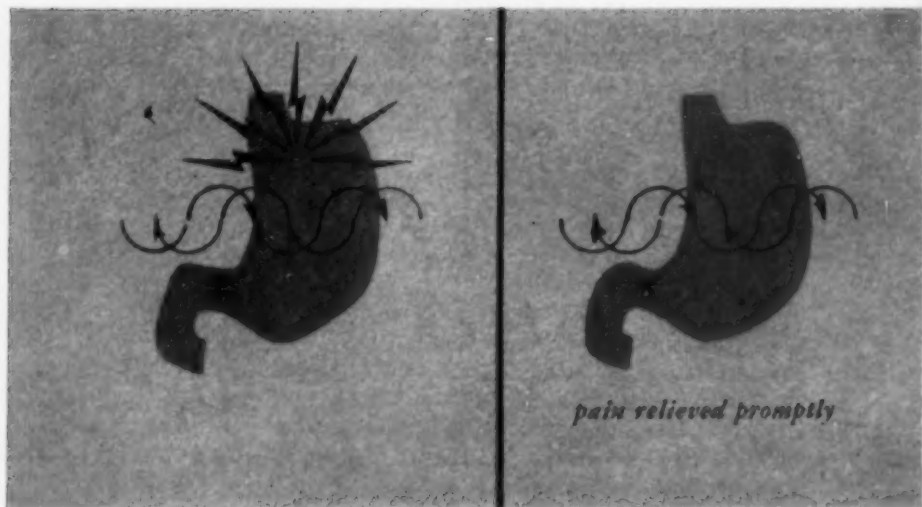
This kept the wolf from the door since I earned a fairly comfortable sum of money while at the same time building up my own practice from scratch.

One of such calls was on a six-year-old girl who had an upper respiratory infection. I examined carefully her eyes, ears, nose, throat, chest and ab-

—Concluded on page 19a

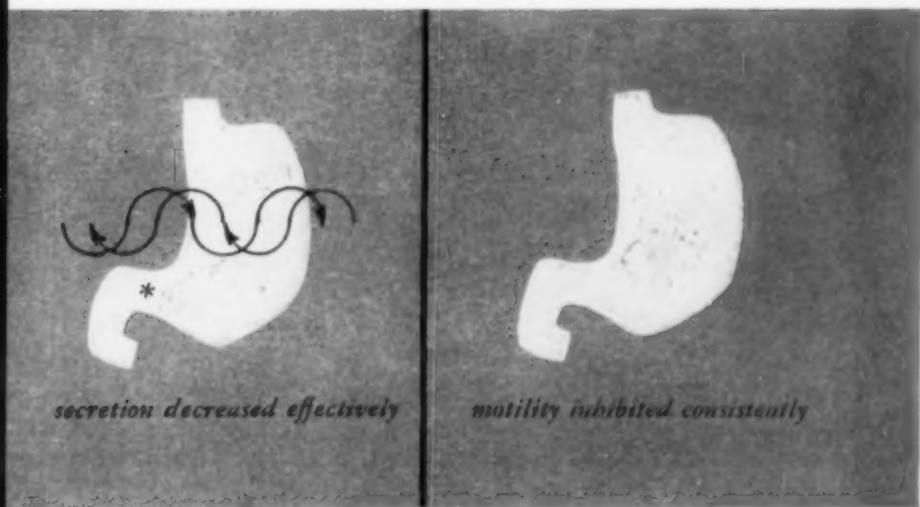
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cidence of side effects," they state, "was minimal. . . ."

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*Lichstein, J.; Morehouse, M. G., and Osmon, K. L.: Pro-Banthine in the Treatment of Peptic Ulcer. A Clinical Evaluation with Gastric Secretory, Motility and Gastroscopic Studies. Report of 60 cases, *Am. J. M. Sc.* 232:156 (Aug.) 1956.

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C I B A
SUMMIT, N. J.

domen. I then explained the situation to the mother while writing a prescription.

I assured the mother that my prescription would cure the little girl promptly but advised the mother to be sure to take the child to Dr. ——— so that he could make arrangements to take the little girl's tonsils out as they were large and infected.

The mother listened to me with wide eyes. Imagine the look on my face the next morning when the "chief" asked me what the idea was telling the patient's mother to have the child's tonsils removed when he had just done a T&A operation on the same child just about a year ago.

Anonymous

Way Down South

One of my most interesting case histories was related by a neurotic lady of foreign extraction who after telling me about her "gold stones" and "coughing flames," confided that her most distressing symptom was "a gust of wind which started in her upper stomach, rolled around her abdominal and came out her virginia."

S.P.D., M.D.
Brockton, Mass.

La Cucaracha

The chef of a small hospital came to the intern with a bad case of hiccups. Both were off duty, but the intern was too pleasantly engaged to be bothered. He gave the chef a large dose of Casafu with a hurried dose of reassurance and affability. Expecting the worst, the in-

tern was later surprised to find the comforted and grateful chef had made a special deep-dish blueberry pie for the intern's own private use.

After this lesson in manners, the intern met the chef's next need with patience, diligence and service beyond the call of duty. However the chef suffered a penicillin reaction and went to a specialist. The intern isn't sure whether it was by accident or design but soon thereafter there was a cockroach under his slice of ham at dinner.

Anonymous

Hot-Foot?

Some time ago a young lady came into my office, and I soon learned her chief complaint was that of a vulgar wart which was causing her some concern. After the nurse prepared her in the usual fashion, I located the offender and generously sterilized it. I then anaesthetized it with a local anaesthetic.

I had recently procured an "electric needle," and I decided this would be a fitting time to initiate it. I placed the needle to the wart, touched the foot pedal, and to my surprise and horror the entire area was ablaze. The flames spread rapidly in all directions. I grabbed frantically for a towel and soon had the conflagration under control.

Despite the fact that the remainder of the operation proceeded normally, the lady was more than slightly provoked having lost not only her dignity. Needless to say, she has not returned for any more treatment.

A.E.J., M.D.
Flint, Mich.

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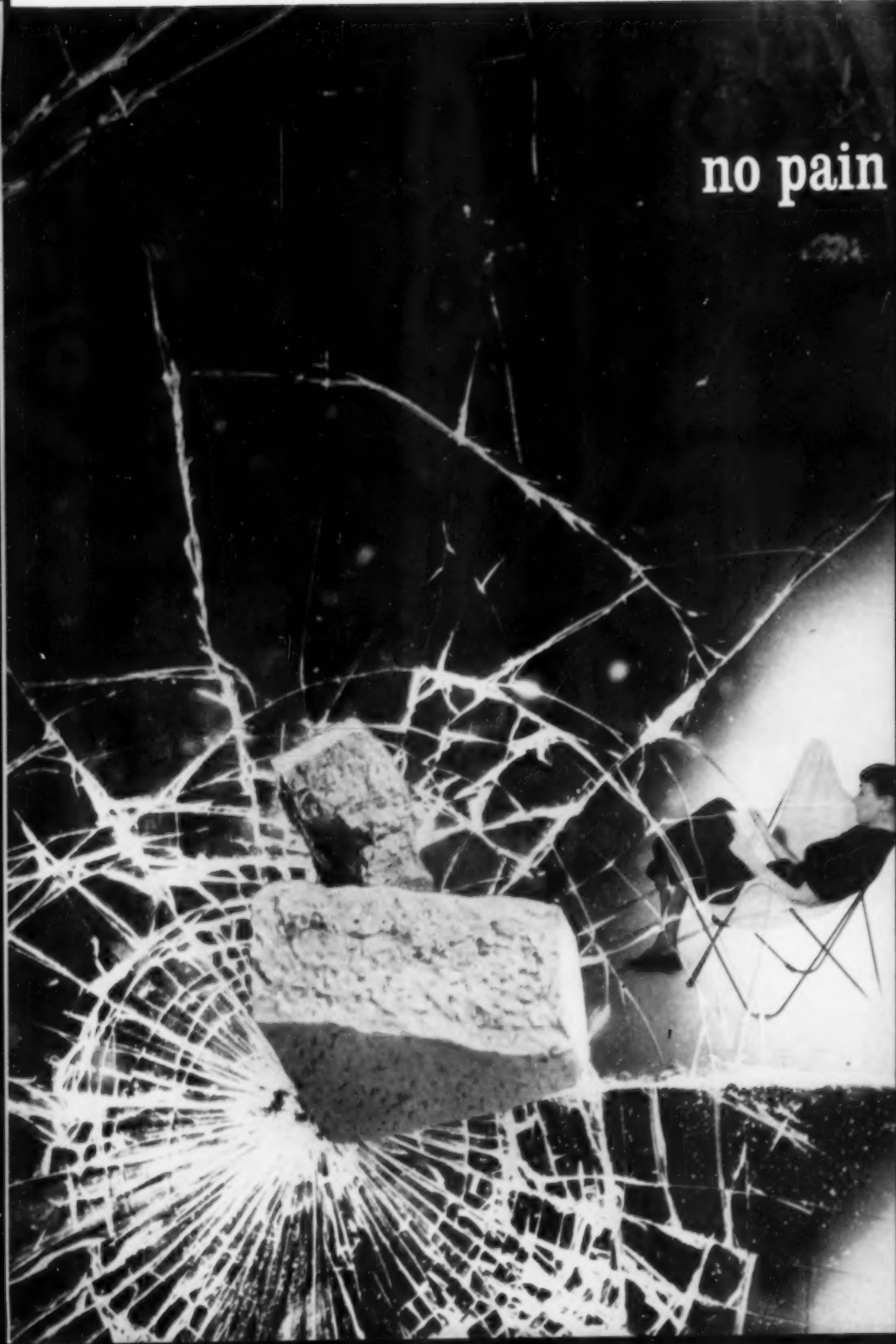
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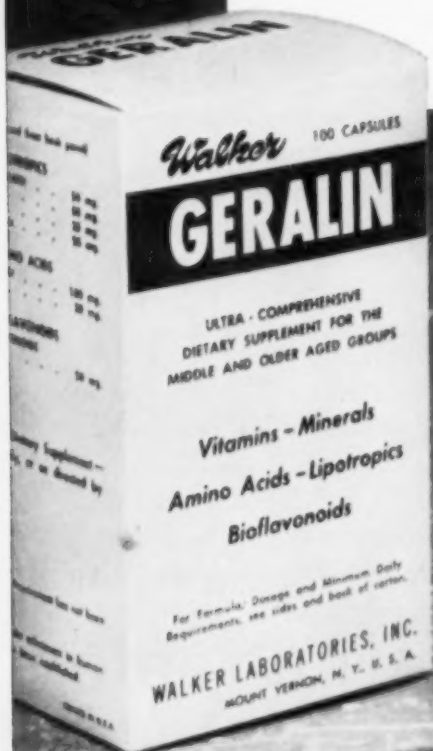


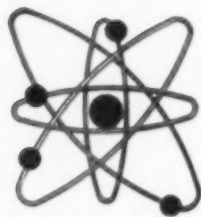
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cerebral vitality...*

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BOTTLES OF 100 AND 1000.





Diagnosis, Please!

Edited by Maxwell H. Poppel, M.D., F.A.C.R., Professor of Radiology,
New York University College of Medicine and Director of Radiology, Bellevue Hospital Center

WHICH IS *YOUR* DIAGNOSIS?

1. Normal
2. Carcinoma of the pancreatic head
3. Carcinoma of the stomach
4. Pancreatitis

(Answer on page 124a)





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initial tetracycline blood levels

complex of tetracycline

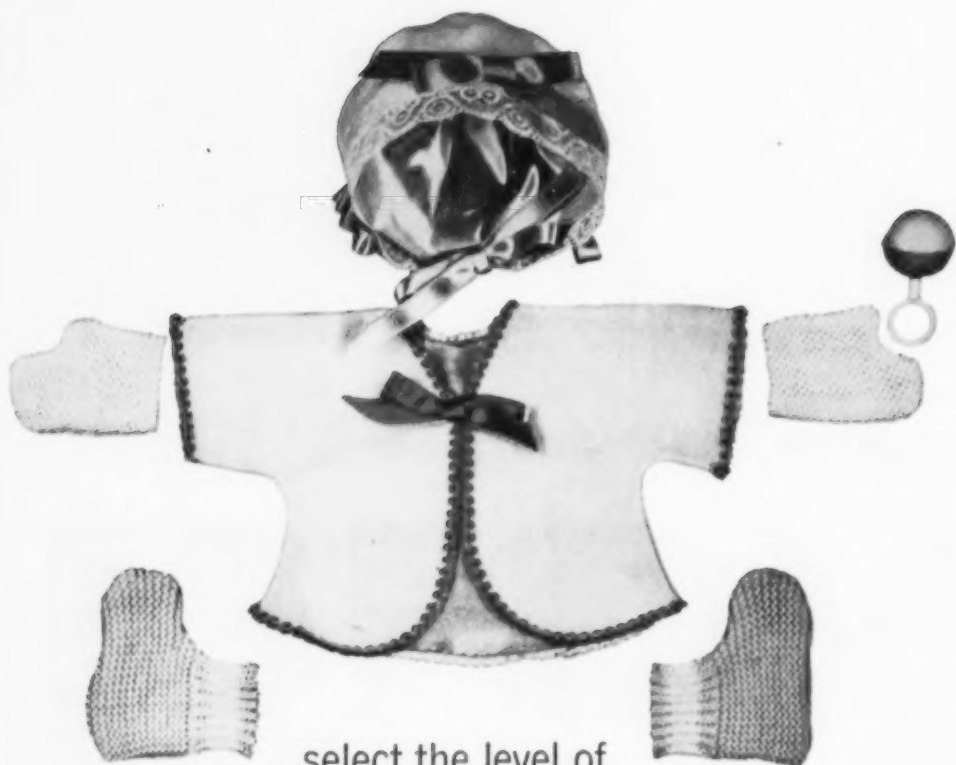
Y C I N

Squibb Tetracycline Phosphate Complex

against pathogenic organisms

Gram Positive Bacteria						
Neisseria	Streptococci	Staphylococci	Pneumococci	Spirochetes	Endamoeba histolytica	Actinomyces

- **SUMYCIN** the new **phosphate complex** of tetracycline
- **SUMYCIN** a **single** antibacterial antibiotic
- **SUMYCIN** a **well tolerated** antibiotic
- **SUMYCIN** a **true** broad spectrum antibiotic



select the level of
vitamin protection the baby needs

Tri-Vi-Sol®

3 basic vitamins...A, D, C

Poly-Vi-Sol®

6 essential vitamins...A, D, C, B₁,
B₂ and niacinamide

Deca-Vi-Sol®

10 nutritionally significant vitamins,
including A, D, C, B₁, B₂, niacin-
amide, biotin, pantothenic acid, B₆
and stable B₁₂



unbreakable
"Safti-Dropper"

- highly stable—refrigeration not required
 - readily accepted—exceptionally pleasant flavor, no unpleasant aftertaste
 - full dosage assured—can be dropped directly into baby's mouth
- In 15 cc., 30 cc. and economical 50 cc. bottles
with calibrated plastic 'Safti-Dropper'

MEAD JOHNSON

SYMBOL OF SERVICE IN MEDICINE

Coroners' Corner

"Highway Accident"

At 8:50 A.M. on a clear day, an automobile veered to the left side of a straight road and struck an oncoming, heavily loaded trailer truck. The car bounced off to the right and came to a stop 125 feet further down the road. The truck careened down the road and finally jackknifed against a pole almost 150 yards from the scene of the collision. The truck driver suffered only minor injuries. The driver of the auto, however, had his throat cut, and died in the hospital one hour and twenty minutes later, despite a ligation of his gaping right jugular vein.

I was immediately impressed by the clean-cut incisions in the throat of the victim. On the left side there was a short, shallow "hesitation" cut. Below this was an incision five inches long. On the right side of the neck was a deep Y-shaped incision nearly six inches long which had severed the jugular vein. The only other injuries were minor contusions and abrasions.

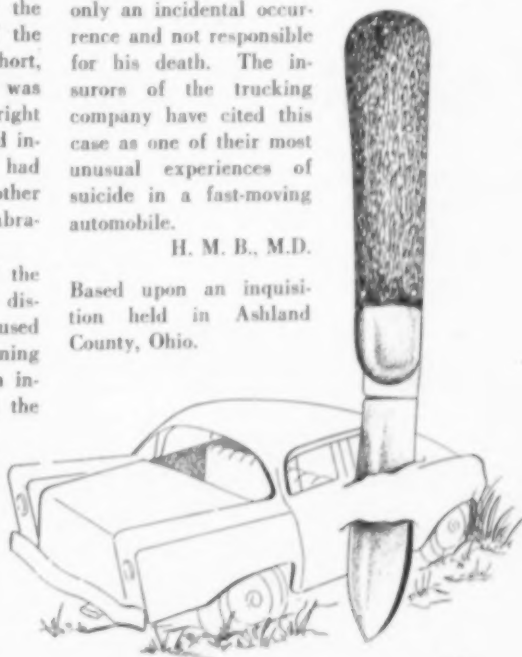
Several thorough examinations of the interior of the car and the roadside disclosed nothing that could have caused such clean incisions. The third morning after the accident, the sheriff and an insurance investigator again examined the car. This time they found a pocket knife under the floor mat. The open blade was coated with dried blood. Laboratory examination showed that the bloodstains on the knife and the seatcover were both type "O". Since the dead man had been alone in the

car, it was evident that this knife was the fatal instrument.

From these facts it appeared that the driver first made the "hesitation" cut on the left side of his throat. He followed this with a deeper slash. Since neither of these was sufficiently deep to cut the large vessels on the left side, he finally made the large slash on the right, severing the jugular vein. The rapid loss of blood caused him to slow down, veer to the left, and crash into the oncoming truck. Because the driver was already dying of hemorrhage, the collision was only an incidental occurrence and not responsible for his death. The insurers of the trucking company have cited this case as one of their most unusual experiences of suicide in a fast-moving automobile.

H. M. B., M.D.

Based upon an inquisition held in Ashland County, Ohio.



NEW!

More Effective...

Medihaler-PhenTM

Each cc. provides phenylephrine HCl 3.6 mg., neomycin sulfate 1.5 mg. (equivalent to 1 mg. of neomycin base), and hydrocortisone 0.6 mg., in 10 cc. leakproof, spillproof vials with metered-dose valve and sterilizable unbreakable plastic nasal adapter.

Unvarying Measured-Dose Nasal Medication

Reaching the Entire Paranasal Mucosa

VASOCONSTRICTIVE Counteracts hyperemia of nasal and paranasal mucosa

ANTI-INFLAMMATORY Neutralizes the exudative phase of tissue reaction

DECONGESTIVE Diminishes edema and hypersecretion... opens sinus ostia

ANTIBIOTIC Attacks bacterial invasion directly

Medihaler-PhenTM... an ethical prescription item...
makes squeeze bottle and dropper medications obsolete

Medihaler-Phen is self-powered, measured-dose vaporized medication providing effective relief for congested nasal and paranasal mucosa.

Its active ingredients—phenylephrine HCl, hydrocortisone, and neomycin sulfate—are in wide clinical use. In Medihaler-Phen, for the first time, they are blended with an inert, nontoxic aerosol propellant, and are made more effective with a penetrating surfactant. An accurately-meas-

ured nebular cloud is gently ejected, regardless of how the Medihaler-Phen valve is compressed—not part spray, part stream as with spray bottles—not an irritating, powerful jet—no drops of liquid which tend to run out of the nasal passages.

Because of the extremely small, uniform particle size of Medihaler-Phen nebulization, less medication is required to decongest the mucosa and open the ostia of paranasal sinuses.

Longer Lasting Relief in Nasal Congestion

RHINITIS
SINUSITIS
PHARYNGITIS

due to upper respiratory infections and allergies

tissue compatible
greater effectiveness
longer lasting
no rebound
vest pocket size

Medihaler-Phen™ is Safe

... FOR CHILDREN, TOO

Repeated use does not result in tachyphylaxis. . . . Does not possess the cardiac and nervous system-stimulating actions characteristic of other topical vasoconstrictors. . . . Even gross overdosage does not lead to drowsiness or deep somnolence in children. . . . Concentration of hydrocortisone effective locally, but produces no systemic effect. . . . Penetrates "mucous blanket" of nasal mucosa without irritation.

OTHER USES Medihaler-Phen is also valuable in the symptomatic treatment of "postnasal drip" due to excessive smoking, air pollution, steam heating, etc.

ANOTHER **Riker** FIRST



As with mother's milk . . .

Proteins

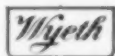
S-M-A contains 1.5 per cent protein,
and adequately satisfies
the baby's standard daily requirement
for 2 Gm. of protein per kilogram of body weight.
The important elements in milk protein
are the amino acids. S-M-A agrees closely
with human milk in its content
of these essential substances.
S-M-A protein is complete and adequate.



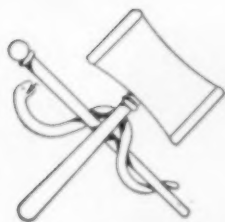
S-M-A[®]

Concentrated Liquid
Instant Powder

for sound infant nutrition



Philadelphia 1, Pa.



What's Your Verdict?

Edited by Ann Picinich, Member of the Bar of New Jersey

A three-year old boy, taken seriously ill one evening, was rushed to the city hospital for an emergency operation. The operation proved ultimately to be successful, but the boy suffered third degree burns to his feet from the use of hot water bottles. An action to recover for his injuries was brought against the operating surgeon, the student nurse and the graduate nurse.

The student nurse testified that someone asked her to fill two hot water bottles. She did so, but could not recall whether she tested the temperature of the water. She then covered the bottles with muslin pillow cases instead of flannel covers as was the proper practice. As she proceeded to apply the bottles to the child's feet, the surgeon stopped her and advised that she give the bottles to the graduate nurse on duty.

The testimony of the graduate nurse was that the surgeon requested her to place the hot water bottles at the child's feet, to which she complied. Several minutes later the physician began the actual incision. Expert testimony produced at the trial indicated that the temperature of the water should not have been greater than 115 or 120 degrees. But to produce the injury it caused, the water must have been at the 212 degree boiling point.

The trial court ordered the action dismissed as to the surgeon, from which

order the plaintiff appeals. The plaintiff contends that the court erred in not submitting the issue to the jury. Whether or not the surgeon exercised such authority and control over the nurses as to render him liable for their negligence is a question of fact for the jury. The surgeon in the operating room is in full control and in charge of all those present, and the surgeon in this case exercised that control in ordering the use of hot water bottles.

The physician maintains that the activities of a nurse performed prior to an operation are done solely in the employ of the hospital. The application of hot water bottles falls within the category of such preliminary activities as cleaning the operating room, sterilizing the instruments to be used, and placing the patient on the operating table, all of which are performed by the nurse as a hospital employee.

How would you decide?

—Concluded on page 164a



establishing
desired
eating
patterns



Obedrin®

and the 60-10-70 Basic Plan

In the development of good eating habits, there are three essentials: supervision by the physician, selective medication, and a balanced eating plan.^{1,2,3}

Obedrin contains:

- Methamphetamine for its anorexigenic and mood-lifting effects.
- Pentobarbital as a balancing agent, to guard against excitation.
- Vitamins B₁ and B₂ plus niacin to supplement the diet.
- Ascorbic acid to aid in the mobilization of tissue fluids.

Since Obedrin contains no artificial bulk, the hazards of impaction are avoided. The 60-10-70 Basic Plan provides for a balanced food intake, with sufficient protein and roughage.

Write for
60-10-70 Menu pads, weight charts
and samples of Obedrin

Formula

Semoxydrine HCl (Methamphetamine HCl) 5 mg.; Pentobarbital 20 mg.; Ascorbic acid 100 mg.; Thiamine HCl 0.5 mg.; Riboflavin 1 mg.; Niacin 5 mg.

1. Eisfelder, H.W.: Am. Pract. & Dig. Treat. 5:778 (Oct., 1954)

2. Sebrell, W.H., Jr.: J.A.M.A. 152:42 (May, 1953)

3. Sherman, R.J.: Medical Times, 82:107 (Feb., 1954)

The S. E. MASSENGILL Company

Bristol, Tennessee

announcing...

chemically conditioned

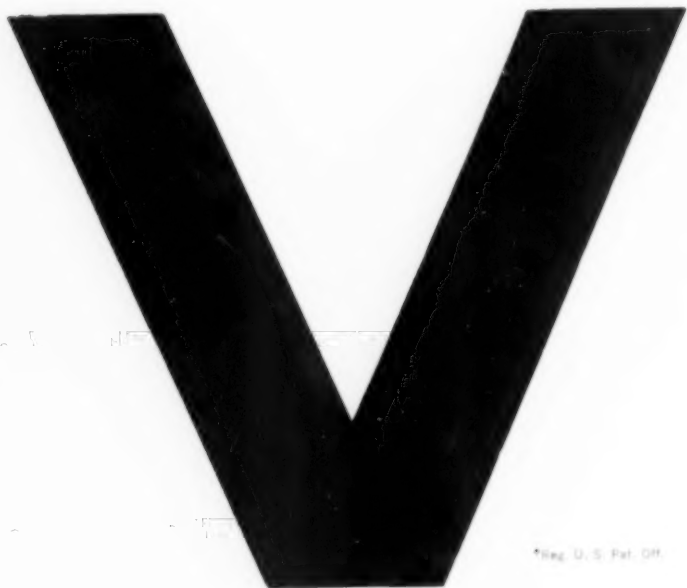
ACHROMYCIN V

ACHROMYCIN* V

Tetracycline Buffered with Sodium Metaphosphate

Chemically Conditioned To Produce Higher — Faster Blood Levels

ACHROMYCIN V combines the well-known antibiotic tetracycline with metaphosphate to provide greater and more rapid absorption of the antibiotic in the intestinal tract. This increased absorption is evidenced by significantly higher blood levels and by an increase in the excretion of the ingested drug in the urine. It is thought that this beneficial absorption is brought about by the chelating effect of the metaphosphate in the intestinal tract.



*Reg. U. S. Pat. Off.

Each capsule (pink) contains: Tetracycline equivalent to 250 mg.
tetracycline HCl; Sodium Metaphosphate 380 mg.

The chemical structure of ACHROMYCIN remains unaltered. However, its tetracycline action is intensified. Chemically conditioned with metaphosphate, ACHROMYCIN V offers increased clinical efficiency. ACHROMYCIN V is indicated in all conditions indicated for ACHROMYCIN Tetracycline, and the recommended dose remains the same—one gram per day for the average adult.

ACHROMYCIN V places a newer, more effective therapeutic agent in the hands of the physician.

ACHROMYCIN V

chemically conditioned for

greater antibiotic absorption

faster broad-spectrum action

Available:
Vials of 16 and Bottles
of 100 Capsules.

Each capsule
(pink) contains:
Tetracycline equivalent
to tetracycline HCl . . .
250 mg
Sodium metaphosphate . . .
380 mg

Dosage: 6-7 mg.
per lb. of body weight
for adults and children.



LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK



for the modern woman...a modern prenatal supplement

Today's pregnant woman is more fortunate than her sister of yesteryear... she looks better, feels better and enjoys greater freedom during her pregnancy. She is free, too, from such traditional prenatal distress as leg cramps, irritability and mild edema when a *modern* prenatal supplement is prescribed.

Usable calcium—Recent evidence points to a new rationale of prenatal nutrition. "... it is apparent that dicalcium phosphate, so widely used as a dietary supplement in pregnancy, is undesirable."* Calcisalin, for routine prenatal supplementation, provides calcium in the *usable* form of the lactate salt, rather than phosphate.

The complete prenatal supplement—Calcisalin also provides reactive aluminum hydroxide gel (to absorb excess dietary phosphorus) and the minimum daily vitamin and iron allowances for pregnancy as recommended by the National Research Council.

Thus the risk of inadvertently raising the phosphorus level to the point where it interferes with calcium absorption is avoided with Calcisalin.

Dosage: Two tablets three times daily after meals. **Available:** Bottles of 100 tablets and 8-oz. reusable nursing bottles containing 300 tablets.

*Page, E. W., and Page, E. P.: *Obstet. & Gynec.* 1:94 (Jan.) 1953.

Calcisalin®

WARNER-CHILCOTT

IN ACNE



Acne patient BEFORE treatment.



Acne patient AFTER 10 weeks therapeutic washing of the skin with Fostex.

RESULTS YOU CAN SEE



for therapeutic washing of skin in acute acne. Also as a therapeutic shampoo in associated oily scalp and dandruff.



for therapeutic washing of skin after acute phase of acne is controlled. Maintains skin dry and comedone free.

Fostex® CREAM/CAKE

In acne, Fostex Cream and Fostex Cake degrease and degerm the skin...unblock pores...remove blackheads and help prevent abscess formation. They're well tolerated and easy to use. All the patient does is stop using soap...start washing with Fostex.

Fostex effectiveness in acne is provided by Sebulytic,* a new combination of surface active cleansing and wetting agents with remarkable antiseborrheic, keratolytic and antibacterial action, enhanced by sulfur 2%, salicylic acid 2%, and hexachlorophene 1%.

Fostex Cream 4.5 oz. jar. Fostex Cake in bar form.

Fostex does not contain selenium.

*Sodium lauryl sulfacetate, sodium alkyl aryl polyether sulfonate, sodium distyl sulfosuccinate

Write for samples and literature.

Westwood

PHARMACEUTICALS

467. Dewitt Street

Division of Foster-McBain Co.

Buffalo 13, New York

IN THE COMMON COLD...

*to prescribe this new,
multiple-action compound
is to promote prompt relief
of symptoms and aid
in preventing
bacterial complications*

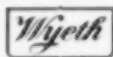


- antibacterial
- analgesic
- antipyretic
- antihistaminic
- sedative
- stimulant

Supplied: Capsules, bottles of 36. Each capsule contains 62.5 mg. (100,000 units) of penicillin V, 194 mg. of salicylamide, 6.25 mg. of promethazine hydrochloride, 130 mg. of phenacetin, and 3 mg. of mephentermine sulfate.

PEN · VEE · Cidin

Penicillin V with Salicylamide, Promethazine Hydrochloride, Phenacetin, and Mephentermine Sulfate



Philadelphia 1, Pa.

relaxes
both mind
and
muscle

for anxiety
and tension in
everyday practice

- nonaddictive, well tolerated, relatively nontoxic
 - well suited for prolonged therapy
- no blood dyscrasias, liver toxicity, Parkinson-like syndrome or nasal stuffiness
 - chemically unrelated to chlorpromazine or reserpine
 - does not produce significant depression
- orally effective within 30 minutes for a period of 6 hours

Indications: **anxiety and tension states, muscle spasm.**

THE ORIGINAL MEPROBAMATE
Miltown®

Tranquilizer with muscle-relaxant action

DISCOVERED AND INTRODUCED

BY  WALLACE LABORATORIES, New Brunswick, N. J.

2-methyl-3-n-propyl-1,3-propanediol dicarbamate—U. S. Patent 2,724,720

SUPPLIED: 400 mg. scored tablets. Usual dose: 1 or 2 tablets t.i.d.

Literature and Samples Available on Request



THE MILTOWN ®
MEPROBAMATE MOLECULE

CM-3708-R2

After Hours

Having grown up in the country and still a country boy at heart, I have always liked guns and hunting. There is nothing in my opinion that will take your mind off your work like getting out in the woods and fields with a good gun over your shoulder for a days hunting.

The first twenty-five years of my life this was rather an easy thing to do, although I didn't always bring home a bag of game. Now after twenty-five years in the Practice of Medicine I am more or less content with just collecting guns and fixing them up for display and the satisfaction of doing something that I enjoy.

The accompanying picture shows a few of my guns. The gun I am holding is a Revolutionary War "Brown Bess" made in England in 1778. It is a flint lock and in perfect condition. The guns standing

Photographs with brief description of your hobby will be welcomed. A beautiful imported German apothecary jar will be sent to each contributor.

are a Winchester 22, a Spanish American War rifle, a Russian rifle 7.62 mm., a Bazooka gun from Afghanistan made in 1804, a double barrel laminated steel muzzle loader and a British .303 cal.

The pistols are Colts, one a Frontiers model. Hanging on the wall is a Moore's revolver and Pepper Box 31 cal. The knives from Nepal, India are called Kukri knives and are carried by British Gurkha soldiers.

WILLIAM RAY MOORE, M.D.
Louisville, Kentucky



added certainty in antibiotic therapy
—particularly for that 90%
of the patient population
treated in home or office
where sensitivity testing
may not be practical . . .



for your
entire
patient
population

multi-spectrum!
Sigmam



100% EFFECTIVE in respiratory infections including the 25% due to resistant staphylococci.¹⁻³

97% EFFECTIVE in dermatologic and mixed soft tissue infections including the 22% resistant to one or more antibiotics.³⁻⁶

84.8% EFFECTIVE in genitourinary infections including the 61% resistant to other antibiotic therapy.^{3,5}

93% EFFECTIVE in diverse infections including the 21% due to resistant pathogens.^{1,5}

98.7% EFFECTIVE in tropical infections including those complicated by heavy bacterial contamination or multiple parasitisms.⁷

the antimicrobial spectrum of tetracycline extended and potentiated with oleandomycin (Matromycin®) to combat resistant strains of pathogens—particularly resistant staphylococci—and to delay or prevent the emergence of new antibiotic-resistant strains.

1. Carter, C. H., and Maley, M. C.: *Antibiotics Annual 1956-1957*, New York, Medical Encyclopedia, Inc., 1957, p. 51. 2. Shalowitz, M., and Sarnoff, H. S.: Personal communication. 3. Shubin, M.: Personal communication. 4. La Caille, R. A., and Prigot, A.: *Antibiotics Annual 1956-1957*, New York, Medical Encyclopedia, Inc., 1957, p. 67. 5. Winton, S. B., and Cheserow, E.: *Antibiotics Annual 1956-1957*, New York, Medical Encyclopedia, Inc., 1957, p. 55. 6. Cornbleet, T.: Personal communication. 7. Loughlin, E. H.; Mullin, W. G.; Alcinder, L., and Joseph, A. A.: *Antibiotics Annual 1956-1957*, New York, Medical Encyclopedia, Inc., 1957, p. 63.

synergistically strengthened

ycin

a new maximum
in therapeutic effectiveness

a new maximum
in protection against resistance

a new maximum
in safety and toleration



SUPPLY

CAPSULES: 250 mg.
(oleandomycin
83 mg., tetracycline
167 mg.). Bottles
of 16 and 100.

new mint-flavored
ORAL SUSPENSION:
1.5 Gm., 125 mg.
per 5 cc. teaspoonful
(oleandomycin
42 mg., tetracycline
83 mg.) 2 oz. bottle.



Pfizer LABORATORIES, Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.
World leader in antibiotic development and production

Medihaler®

For the Asthmatic



Fast Relief

Medihaler offers virtually instantaneous relief and does so with little effort and with maximum safety.

Measured-Dose True Nebulization

Delivers a measured dose of true nebular vapor...Dose is always the same regardless of strength of fingers or amount of medication in bottle.

Costs the Patient Less

Medihaler Oral Adapter is made of unbreakable plastic...no moving parts...and 200 applications in each 10 cc. bottle.

Medihaler-Epi®

Riker brand of epinephrine U.S.P. 0.5% solution in inert, nontoxic aerosol vehicle. Each ejection delivers 0.125 mg. epinephrine. In 10 cc. vial with metered-dose valve.

Indicated in acute or recurring bronchospasm. Replaces injected epinephrine in many emergency situations.

Medihaler-Iso®

Riker brand of isoproterenol HCl 0.25% solution in inert, nontoxic aerosol vehicle. Each ejection delivers 0.06 mg. isoproterenol. In 10 cc. vial with metered-dose valve. • Indicated in acute or recurring bronchospasm.

Note: First prescription should include desired medication and Medihaler Oral Adapter, supplied with pocket-sized plastic container.

The Medihaler principle

is also available in Medihaler-Nitro™ (octyl nitrite) for the rapid relief of angina pectoris...and Medihaler-Phen™ (phenylephrine-hydrocortisone-neomycin) for lasting, effective relief of nasal congestion.

Riker

LOS ANGELES

Medical Teasers

A Challenging Crossword Puzzle for the Physician

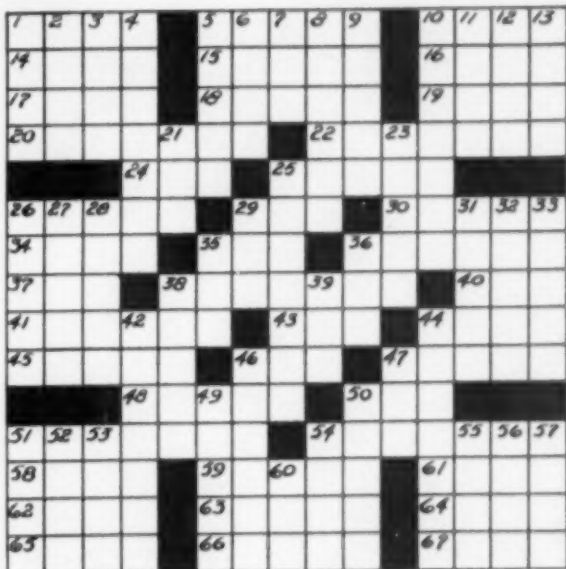
(Solution on page 156a)

HORIZONTAL

1. Periods of time
5. Relating to birth
10. Inflammation (suffix)
14. Peculiar sensation felt by epileptics
15. South African antelope
16. Lymph "Gland"
17. Prophet
18. Mental test
19. Suffix denoting a swelling or hernia
20. Windpipe
22. Makes corrections in a manuscript
24. Substance soluble in ether
25. Test objects in ophthalmometers
26. Hemostat
29. Marshy meadow
30. Birthmark
34. Prefix meaning blood
35. A dull finish
36. Relating to audition
37. Japanese sash
38. Pills for deodorizing the breath
40. A genus of filarial worms
41. Cathode Rays outside discharge tube
43. Morsel left at a meal
44. Slash
45. A South American fever
46. Right-Occipito-Anterior (Lat. Abbr.)
47. Unmarried girls
48. Characteristic spore case of the ascomycetes
50. Smallest increase in loudness that human ear can detect
51. Powerful irritant
54. A surgical tent
58. Middle coat of the eye
59. Childbirth
61. Refuse of grapes
62. To sign (Obs.)
63. Amusing and strange
64. Persia
65. Malay vessel
66. Antrum
67. Term in ancient Greek music

VERTICAL

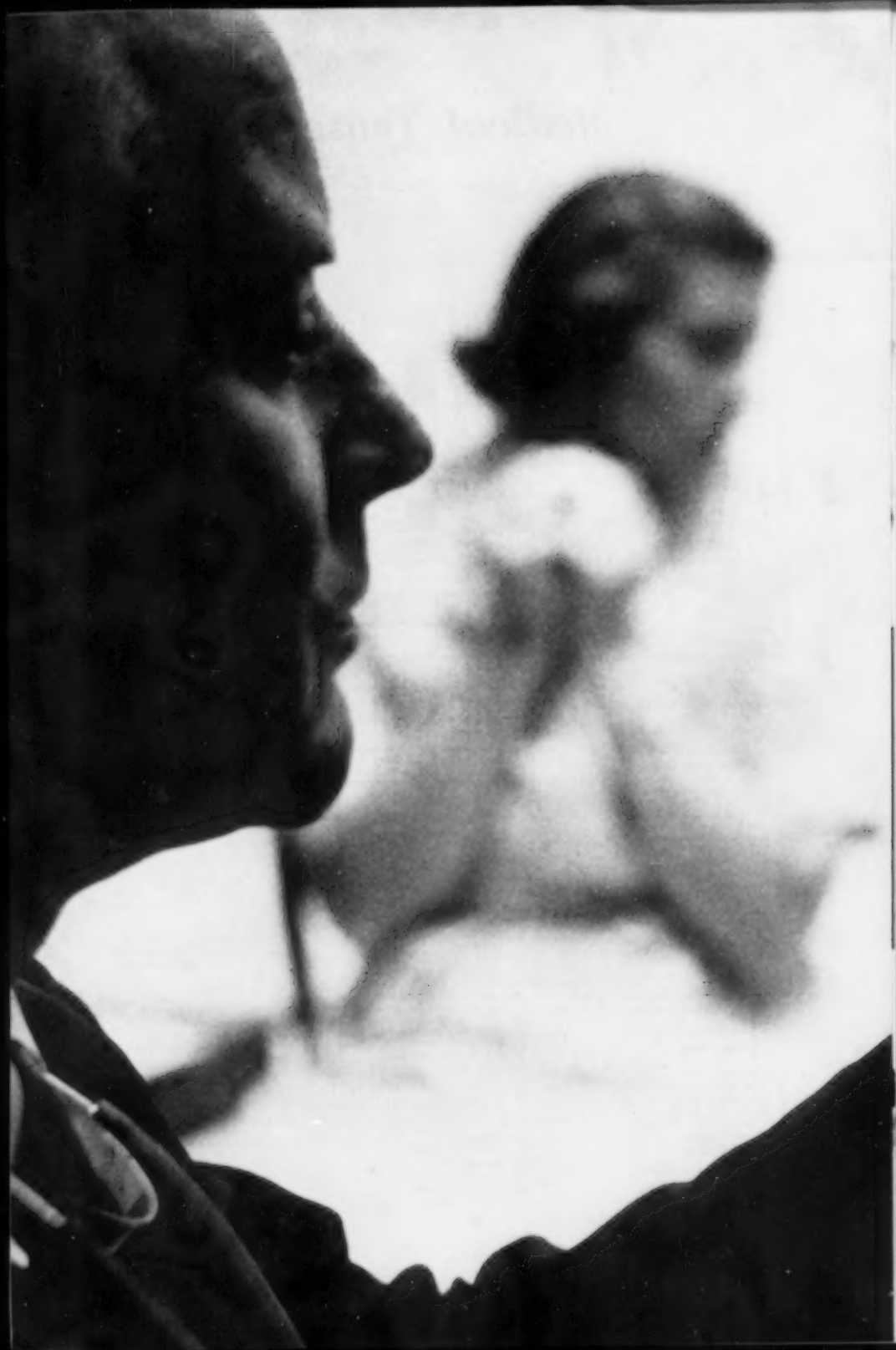
1. Compass point
2. One who repents
3. Any plane surface
4. Malignant tumor
5. He endowed a prize for medicine
6. Operatic solo
7. Stannum
8. Synonym for Dovyalis
9. 1000 cc.
10. Cut



From: Jo Paquin

11. Pedal digits
12. Not working
13. Observes
21. Cosa
23. Copper, in old chemistry
25. Manners of performing an operation
26. Bile: combining form
27. German ophthalmologist (1840-1917)
28. The body resynthesizes its proteins from these acids
29. Milk
31. Minute, elongated projections from the surface of a membrane
32. Scarlike
33. Installs in office
35. Insane
36. Automatic (Abbr.)
38. This often results in severe injury

39. Margin
42. Aromatic stimulant
44. Aluminum salicylate employed in pharyngitis
46. Curare
47. Mal de ... (seasickness)
49. Acute upper respiratory infections
50. Knots in thread
51. Pointed eminence of a tooth
52. Affirm
53. —sis, the maturation process of Gametes
54. A kind of balsam, used as a stomachic
55. —s, nostrils
56. Euphemistic form of an oath
57. May spoil an adolescent's looks
60. —s, os



When agitation must be controlled...

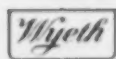
SPARINE offers dramatic tranquilizing action.

In your practice, it is a means to simplify difficult management—to bring acute agitation under prompt control.

SPARINE is well tolerated on intravenous, intramuscular, or oral administration. Toxicity is minimal—no case of liver damage has been reported. Parenteral use offers

- (1) minimal injection pain; (2) no tissue necrosis at the injection site; (3) potency of 50 mg. per cc.;
- (4) no need for reconstitution before injection.

Professional literature available upon request.



Philadelphia 1, Pa.

* Sparine

HYDROCHLORIDE

Promazine Hydrochloride

10-(γ-dimethylamino-n-propyl)-phenothiazine hydrochloride

[®]Trademark

in acute subdeltoid bursitis

clinical response follows a pattern...

Pain is relieved, function returns, swelling subsides and tenderness disappears.¹ Usually, relief is manifest in one or two days and complete within a week.

MY-B-DEN[®]

(adenosine-5-monophosphate)

systemic muscle adenylic acid therapy

and in chronic calcific bursitis...

An average of 9 injections of MY-B-DEN produced subjective and objective improvement in 31 of 36 patients, the majority of whom had not previously experienced any change in their "complaint-disability" patterns over periods of months to years.²

Write for brochure and dosage schedules.

1. Rottino, A.: *Journal-Lancet* 71:237, 1951.

2. Susinno, A. M., and Verdon, R. E.: *J.A.M.A.* 154:239, 1954.



AMES COMPANY, INC · ELKHART, INDIANA



Who Is This Doctor?

Born at Taganrog, Russia, in 1860, a son of simple, half-educated, religious people, he was given a liberal education. In 1879 he graduated from Gymnasium in Taganrog and matriculated as a student of the Medical Faculty of the Moscow University. He obtained his medical degree in 1884. While studying, he began to write short stories for comic papers. In 1886 a series of his stories was collected in a book which had an immediate success. This was soon followed by another volume. Many of his later stories included doctors as the acting personages. Having gained popularity, he was able to write exclusively for the largest daily paper in Moscow and became financially independent. On taking his degree he did not settle down to practice as a doctor but continued his literary career. His short stories, which made his name world famous, marked a new era in Russian literature.

In 1890 he traveled through Siberia and made a thorough investigation of convict life. The results were published in the book "Sakhalin Island" (1891). This book is supposed to have influenced certain reforms in prison life which were introduced in 1892. During the cholera epidemic of 1892-93 he worked as the head of a sanitary district.

In 1895 he wrote "The Seagull" which had a great success as a stage play under the direction of Stanislavsky. He produced several other plays, among them "Uncle Vanya," "The Three Sisters" and, best known in this country, "The Cherry Orchard." In 1901 he married a leading actress of the Art Theater, Olga L. Knipper, who performed many major roles in his plays. The last years of his life were spent in Yalta where he had built himself a villa. He suffered from tuberculosis, was sent to a German health resort in the Black Forest and died there in June, 1904. His body was returned to Moscow for interment.

His literary works had a great influence upon many modern authors, among them Bernard Shaw and Ernest Hemingway.

Can you name the doctor without turning to page 144a?

*more effective than one
or two pints of tap water
or salt solution*



FLEET® ENEMA

Disposable Unit

"Squeeze bottle" sized for easy one hand administration . . . distinctive rubber diaphragm controls flow, prevents leakage . . . correct length of rectal tube minimizes injury hazard . . . each unit contains, per 100 c.c., 16 gm. sodium biphosphate and 6 gm. sodium phosphate . . . an enema solution of Phospho-Soda (Fleet) . . . gentle, prompt, thorough . . . and less irritating than soap suds enemas.

Established 1869

C. B. FLEET CO., INC., LYNCHBURG, VIRGINIA
Makers of Phospho® Soda (Fleet), a modern laxative of choice.



Oral penicillin for you
to depend upon...

INCOMPARABLE
oral
reliability

COMPARABLE
to injection
reliability

- Unparalleled gastric stability
- Prompt, optimal duodenal absorption
- Injection-like blood levels

ORAL Penicillin with INJECTION Performance

PEN·VEE[®] *Oral
and
Suspension*

PEN·VEE·Oral is Penicillin V, Crystalline (Phenoxymethyl Penicillin), Tablets

PEN·VEE Suspension is Benzathine Penicillin V Oral Suspension



Philadelphia 1, Pa.

1 TAB.


VERACOLATE

THE PHYSIOLOGICALLY-ACTIVE LAXATIVE

T.I.D.

EASE OF EVACUATION IS OF PRIME IMPORTANCE TO YOUR CONSTIPATED PATIENTS. VERACOLATE, 1 TABLET T.I.D., HAS A GENTLE, NON-IRRITATING ACTION, ENHANCES BILE FLOW THROUGH THE HEPATO-INTESTINAL TRACT. THUS, FAT DIGESTION AND FOOD ABSORPTION ARE AIDED, WHILE NORMAL BOWEL HABITS ARE RE-ESTABLISHED—SAFELY AND EFFECTIVELY.

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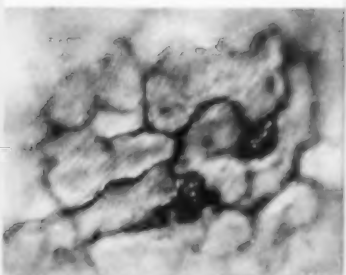
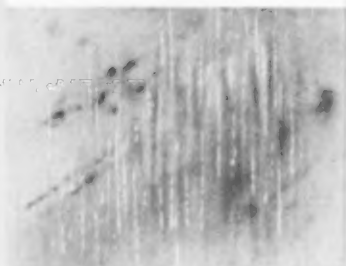
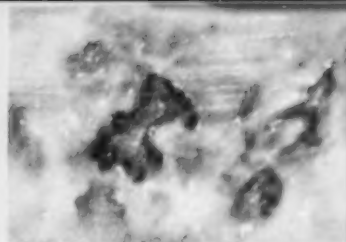
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eczemas

Meti-Derm CREAM 0.5%
(METICORTELONE, free alcohol)

Meti-Derm OINTMENT 0.5%
with Neomycin

each in 10 Gm. tubes

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excellent response in eczematous dermatoses

Meti-Derm CREAM 0.5%

(METICORTEZONE, free alcohol)

water washable—stainless

benefits allergic dermatoses, usually without irritation

Meti-Derm OINTMENT 0.5%

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5 mg. METICORTEZONE and 5 mg. Neomycin Sulfate

advantageous when infection is present or suspected

Each in 10 Gm. tubes

METI-DERM,® brand of prednisolone topical.
METICORTEZONE,® brand of prednisolone.
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Proteins

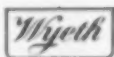
S-M-A contains 1.5 per cent protein,
and adequately satisfies
the baby's standard daily requirement
for 2 Gm. of protein per kilogram of body weight.
The important elements in milk protein
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with human milk in its content
of these essential substances.
S-M-A protein is complete and adequate.



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S-M-A[®]

Concentrated Liquid
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Metrazol

ORAL



in senility
geriatrics
convalescence
fatigue states
debility

DOSE: 1 or 2 tablets or tea-spoonfuls METRAZOL Liquidum three or four times a day, starting with the larger dose for the first few weeks.

Metrazol® brand of Pentylene-tetrazol, a product of E. Bilhuber, Inc.

BILHUBER-KNOLL CORP.
ORANGE, NEW JERSEY

LETTERS TO THE EDITOR

This department is offered as an Open Forum for the discussion of topical medical issues. All letters must be signed. However, to protect the identity of writers, who are invited to comment on controversial subjects, names will be omitted when requested.

Multiple Sclerosis

Over the past three years I have been treating multiple sclerosis and other progressive organic neurologic disease syndromes by administering "anti-inflammatory" steroids into the spinal subarachnoid space. Since one report covering all phases of this study would be too voluminous for one publication, certain important features will be presented at separate reports.

One phase of this work consisted of studying the clinical neurologic effects following the combined subarachnoid injections of gamma globulin and solubilized 9-alpha-fluorohydrocortisone free alcohol in seventeen patients suffering with multiple sclerosis, and three patients with amyotrophic lateral sclerosis.

Injections were given through the period of September, October and November 1955. A total of 61 injections were given. The individual dose of gamma globulin varied from 0.5 to 2

—Concluded on page 56a

MEDICAL TIMES



some appetites
need a nudge

GOOD TASTING

Stimavite®
Tastitabs®

STIMULATE { appetite
growth

... and with Stimavite Tastitabs you can prod lagging appetites and promote growth in younger patients, perk up the "picky" adult eater. Their delicious natural fruit flavor makes patient cooperation easy.

Each STIMAVITE TASTITAB contains:

L-lysine.....15 mg. for amino-acid improved protein quality.
Vitamin B₁₂.....20 mcg. for appetite and growth stimulation.
Vitamin B₆.....10 mg. for appetite stimulation.
Vitamin B₆.....3 mg. for improved protein metabolism.
Vitamin C.....25 mg. for better hemoglobin formation and
(as sodium ascorbate) nucleic acid synthesis.

For the younger patient who doesn't like to eat, or who eats out of balance, and for the adult who eats like a bird, one or two Stimavite Tastitabs daily, at mealtime. Can be chewed, swallowed whole, allowed to melt in the mouth, or dissolved in liquids.

Bottles of 30 and 100 Tastitabs.



Chicago 11, Illinois PEACE of mind ATARAX®

*Trademark

A NEW TREATMENT FOR ARTERIOSCLEROSIS

A recent clinical investigation¹ of 59 cases of generalized arteriosclerosis, treated with Iodo-Niacin Tablets for over a year, showed relief of dizziness in 71% of cases, of vague abdominal distress in 87%, of chronic headaches in 61%, and of disorientation in 50%.

There was no symptom of iodism or other side-effect in any case, even when large doses were maintained.

Iodo-Niacin Tablets contain potassium iodide 135 mg. (2¼ gr.) and niacinamide hydroiodide 25 mg. (¾ gr.). It has been established that niacinamide hydroiodide² prevents and corrects iodism specifically.

Long continued administration of iodides is believed to absorb cellular exudates in the arterial walls.³ Many medical authorities recommend iodides for arteriosclerosis but warn against the hazard of iodism.

The recommended dose of Iodo-Niacin is 2 tablets three may be continued indefinitely or four times daily. This dosage with no apparent risk of iodism.

Supplied in bottles of 100 tablets, slosol-coated, pink. Iodo-Niacin Ampuls are recommended in emergencies for intramuscular or slow intravenous injection.



Effective for Arteriosclerosis

Cole CHEMICAL COMPANY
3721-27 Laclede Ave., St. Louis 8, Mo.

1. Feinblatt, T. M., Feinblatt, H. M., and Ferguson, E. A., *Am. J. Digest. Dis.* 22:5, 19

2. Sollmann, T., *Manual of Pharmacology*, 7th ed., 1948, p. 818.

3. *Ibid.* ref. #1, *M. Times* 84:741, 1956.

* U.S. PATENT PENDING

COLE CHEMICAL COMPANY
3721-27 Laclede Ave., St. Louis 8, Mo.

Gentlemen: Please send me professional literature and samples of IODO-NIACIN.

M.D.

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ZONE

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in cold weather complaints

tonsillitis - bronchitis

The warming relief provided by Numotizine in tonsillitis, bronchitis and related respiratory conditions is welcomed by the patient, helpful to convalescence.

An application of Numotizine causes vasodilation and produces analgesia to assist decongestion and relax the patient, thereby hastening recovery.

Numotizine is easy to apply, requires no heating, and relieves for eight or more hours without changing. It is compatible with the use of such specific medication as may be indicated.



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Supplied in 4, 8, 15 and 30-oz. jars.

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When a *Plain*
Nasal Decongestant
Is Indicated...


Neo-Synephrine[®]
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Nasal Spray

*Unsurpassed... Most widely prescribed**

0.5% Nasal Spray for Adults, 20 cc.
0.25% Pediatric Nasal Spray, 20 cc.
0.25%, 0.5% and 1% Solutions,
bottles of 1 fl. oz. with dropper

*Prompt and
Prolonged Relief in...*

■ COLDS
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NO IRRITATION • NO SEDATION
NO EXCITATION

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Neo-Synephrine (brand of
phenylephrine), trademark
reg. U. S. Pat. Off.
*according to current
national Rx audits

LETTERS TO THE EDITOR

—Concluded from page 52a

ml. Of the patients with multiple sclerosis, four received a total of 1 to 2 ml., six, 2 to 3 ml., one, 4 to 5 ml., two, 5 to 6 ml., two 6 to 7 ml. and one patient received a total of 9.0 ml. Of the patients with amyotrophic lateral sclerosis each of the three received a total of 2.5, 4 and 4.5 ml. The patients that received between 3 and 6 ml. of gamma globulin received their injections every other day while they were hospitalized. The individual intrathecal dose of fluorohydrocortisone ranged from 2 to 5 mgm.

The results of treatment to date in this group of patients when contrasted to the group that received fluorohydrocortisone and no gamma globulin, indicate no discernible difference in the objective clinical neurologic examination which would indicate that gamma globulin contributed anything in the therapeutic sense.

It must be realized, however, that additional studies must be done wherein complement should be administered with gamma globulin at the time of the injection. Reasons, of course, are obvious.

Gamma globulin Lot #2175-236A, 2167-119A, 2175-251 was supplied by Dr. J. M. Rueggesser of the Lederle Laboratories, Pearl River, New York.

Fluorohydrocortisone (bulk) was supplied by Dr. Henry A. Strade of the Squibb Institute, New Brunswick, New Jersey.

George F. Kamen, M.D.
Greenwich, Connecticut

MEDICAL TIMES

An ideal
family vitamin-mineral
formula—

GEVRAL*

VITAMIN-MINERAL SUPPLEMENT LEDERLE



Since daily dosage is an important part of supplementation, GEVRAL is now packaged in a special JUBILEE JAR—an attractive container of 100 capsules for the family dining table. Specify GEVRAL. Your patients will remember to take their "vitamins" regularly when they have the JUBILEE JAR before them at mealtime.

GEVRAL is aptly formulated to meet the broad vitamin-mineral requirements of daily life. Balanced, comprehensive, GEVRAL provides 14 vitamins, 11 minerals and Purified Intrinsic Factor Concentrate. Dosage is only one *dry-filled* capsule daily.

Each GEVRAL capsule contains:

Vitamin A	5000 U.S.P. Units
Vitamin D	500 U.S.P. Units
Vitamin B ₁	1 mcgm.
Thiamine Mononitrate (B ₁)	5 mg.
Riboflavin (B ₂)	5 mg.
Niacinamide	15 mg.
Folic Acid	1 mg.
Pyridoxine HCl (B ₆)	0.5 mg.
Ca Pantothenate	5 mg.
Choline Bitartrate	50 mg.
Inositol	50 mg.
Ascorbic Acid (C)	50 mg.
Vitamin E (as tocopheryl acetates)	10 I. U.
L-Lysine Monohydrochloride	25 mg.
Rutin	25 mg.
Purified Intrinsic Factor Concentrate	0.5 mg.
Iron (as FeSO ₄)	10 mg.
Iodine (as KI)	0.5 mg.
Calcium (as CaHPO ₄)	145 mg.
Phosphorus (as CaHPO ₄)	110 mg.
Boron (as Na ₂ B ₄ O ₇ • 10H ₂ O)	0.1 mg.
Copper (as CuO)	1 mg.
Fluorine (as CaF ₂)	0.1 mg.
Manganese (as MnO ₂)	1 mg.
Magnesium (as MgO)	1 mg.
Potassium (as K ₂ SO ₄)	5 mg.
Zinc (as ZnO)	0.5 mg.

LEDERLE LABORATORIES DIVISION, GREENE'S CHEMICAL COMPANY, PEARL RIVER, NEW YORK

Lederle

WORTH YOUR INVESTIGATION



SIX REASONS WHY PHYSICIANS ARE RECOMMENDING *Koro-Flex*



FIG. 1



FIG. 2



FIG. 3

1. Expressly designed to assure your patient ease of insertion and automatic placement.
2. Conserves physician's time by reducing fitting and instruction period.
3. Patients learn faster and develop greater confidence because of the ease with which they learn to place and use the diaphragm.
4. Affords greater patient protection by locking in spermicidal lubricant and delivering it directly under and next to the os uteri.
5. Folds behind pubic bone with suction-like action forming a more effective barrier.
6. Simple to remove.

When compressed, diaphragm forms into semi-curve or half-moon shape (Fig. 1) permitting it to pass easily along floor of the vagina beyond cervix (Fig. 2) without any difficulty. No mechanical inserter or introducer required (see Fig. 2) since the KORO-FLEX will not buckle or butterfly in form.

KORO-FLEX (contouring) Diaphragm is ideal, not only where ordinary coispring diaphragms are indicated but for flat rim (Mensinga) type as well.

May be used in cases of mild prolapse, cystocele or rectocele.

Suggest the convenient-economical
KORO-FLEX COMPACT 60-95 mm
Sanitary plastic bag with zipper closure.
Diaphragm, tube KOROMEX Jelly (3 oz.),
Cream (1 oz. trial size).

Available at all prescription pharmacies. Write for descriptive literature.



Holland-Rantos Co., Inc. Manufacturers of **KOROMEX** Products, New York 13, N. Y.



for more than a decade ...

trichotine®

...proved effective in vulvovaginal therapy

Trichotine—more than a decade ago—pioneered in newer, more effective vulvovaginal therapy by combining the multiple advantages of sodium lauryl sulphate with the recognized values of such specific or adjunctive agents as sodium perborate, sodium borate, thymol, eucalyptol, menthol and methyl salicylate.

Extensive clinical experience has proved its efficacy in trichomonas vaginalis vaginitis, subacute and chronic cervicitis, vulvovaginal moniliasis, non-specific leukorrhea, and pruritus vulvae.

Trichotine douches may be prescribed as often as indicated—excellent also for postmenstrual or postcoital hygiene. Concentrated solutions are useful for clean-up or swab treatments in office. Hot packs are often quickly effective in pruritus vulvae.

A DETERGENT · A BACTERICIDE AND FUNGICIDE · AN ANTIPRURITIC
AN AID TO EPITHELIZATION · AN AESTHETIC AND PSYCHOSOMATIC ADJUNCT

Sample and literature on request Available in jars of 5, 12 and 20 oz.

the fesler co., inc., 375 Fairfield Ave., Stamford, Conn.



*a true
cough specific
non-narcotic*

ROMILAR 'Roche'

For suppressing cough, whatever the cause, Romilar is at least as effective as codeine. Yet it has no general sedative or respiratory-depressant activity, and it's remarkably free of side effects such as nausea, constipation, or tendency to habit formation. Available as a syrup, in tablets, or expectorant mixture (with ammonium chloride).



Original Research in Medicine and Chemistry

Romilar® hydrobromide — brand of dextromethorphen hydrobromide



Mediquiz

These questions are from a civil service examination recently given to candidates for physician appointments in municipal government. Like to see how you would fare? Answers will be found on page 161a.

1. Certain effects follow the establishment of an arterio-venous fistula between the femoral vessels. The one of the following which is not such an effect is: (A) acceleration of the heart; (B) a marked elevation of the diastolic pressure; (C) a continuous vibratory thrill; (D) dilatation and hypertrophy of the heart.

2. In performing a saphenous ligation for varicose veins the one of the following veins which you would not ligate is the: (A) lateral superficial femoral vein; (B) inferior epigastric vein; (C) superficial circumflex vein; (D) superficial external pudendal vein.

3. The one of the following conditions in which splenectomy would be advisable is: (A) acute lymphatic leukemia; (B) sarcoma of the spleen; (C) congenital hemolytic icterus; (D) essential thrombocytopenic purpura.

4. The one of the following methods which you would not use to estimate the amount of fluid to replace in a thermal burn is: (A) hematocrit estimation; (B) estimation of plasma protein;

(C) estimation of surface area of body; (D) estimation of the degree of burn.

5. The muscles which act as flexors at the metacarpo-phalangeal joints and extensors of the fingers at both interphalangeal joints are the: (A) flexor digitorum profundus; (B) lumbricals; (C) interossei; (D) pronator quadratus.

6. The position of the posterior tibial nerve at the ankle is: (A) behind the lateral malleolus; (B) in front of the ankle between the two malleoli; (C) between the medial malleolus and the tendo Achillis; (D) in back of the ankle half way between the two malleoli.

7. Of the following, the one which is not a liver function test is the: (A) glucose tolerance test; (B) determination of alkaline phosphatase; (C) determination of albumin-globulin ratio; (D) determination of acid phosphatase in the blood.

8. The condition associated with shock in which hemoconcentration is most apt to occur is: (A) burns; (B)

—Continued on page 65a

Better Calcium Assimilation

TWICE THE PERCENTAL
INCREASE OF TOTAL
CALCIUM*

OYSTER SHELL VITAMINS MINERALS
OS-VIM

OYSTER SHELL

- Contains Trace Minerals
- Contains More Calcium
- Is Phosphorus Free (Naturally)

LOW DOSAGE (1 tab t.i.d.)

LOW COST (3 cents per tablet)

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MARION LABORATORIES

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KANSAS CITY, MISSOURI

- Write for samples and literature
- Available at any NWDA
Wholesaler

*Hardy, J. A.:
Obstet. & Gynec. (Nov. 1956)



STERANE[®] won't straighten his hook, cure his slice or put him on the green in three...but **STERANE** may reduce your rheumatoid arthritic's handicap of joint pain, swelling and immobility. The most potent anti-rheumatic steroid, **STERANE** (prednisolone) is supplied as white, scored 5 mg. tablets (bottles of 20 and 100) and pink, scored 1 mg. tablets (bottles of 100).



PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. Brooklyn 6, New York

In urinary tract disturbances Pyridium® achieves the first objective

(Brand of Phenylazo-diamino-pyridine HCl)



relief of pain, urgency, frequency, burning in a matter of minutes

With PYRIDIUM, irritated urinary tissues are bathed in a continuous flow of analgesic fluid, keeping the patient comfortable during diagnostic procedures and while maintaining therapy. The benefits of therapy with PYRIDIUM include • gratifying relief in a matter of minutes—long before specific therapy, if required, can take effect • elimination of urinary retention due to pain spasm • local analgesia only • complementary to any antibacterial of the physician's choice — allows separate control of analgesic and antibacterial therapy • simple, convenient dosage — just 2 tablets before meals for adults.

Pyridium is the registered trade-mark of Hesper Chemical Co., Inc. for its brand of phenylazo-diamino-pyridine HCl. Merck Sharp & Dohme, Division of Merck & Co., Inc., sole distributor in the United States.

MERCK SHARP & DOHME • DIVISION OF MERCK & CO., INC. • PHILADELPHIA 1, PA.

compound fracture of the femur; (C) hemorrhage; (D) coronary thrombosis.

9. The condition in which disruption of a post-operative abdominal wound is likely to occur is: (A) when sutured with alloy steel wire; (B) hypoproteinemia; (C) vitamin A deficiency.

10. In intravascular clotting or thrombosis the one factor which is not important is: (A) injury to vessel wall; (B) slowing the blood stream; (C) lack of vitamin C; (D) increased viscosity of the blood.

11. A man jumps from a height of ten feet and lands on his feet but does not fall to the ground. Ten hours later he is admitted to the hospital with the clinical signs and symptoms of an acute abdomen. Of the following, the measure most likely to indicate the correct diagnosis is: (A) three-position x-ray of the abdomen; (B) intravenous pyelogram; (C) x-ray of the spine; (D) laboratory study of blood volume and content.

12. A patient is admitted with a pathologic fracture of the femur. The laboratory findings include: calcium normal, phosphorus normal, alkaline phosphatase slightly elevated, serum N.P.N. normal, albumin globulin ratio normal. In addition to management of the fracture, the procedure most likely to be indicated is: (A) parathyroidectomy; (B) orchidectomy; (C)

local radiotherapy to the fracture; (D) thyroidectomy; oral administration of irradiated iodine.

13. The best treatment for an incised wound which divides all flexor tendons at the level of the proximal inter-phalangeal joint of a finger is: (A) careful repair of all divided structures, including the tendon sheath; (B) repair of profundus tendon, and suture of the sublimis to it; (C) repair of profundus tendon and excision of the sublimis; (D) repair of the sublimis and excision of the profundus tendon.

14. Of the following, the mechanism least likely to injure the right brachial plexus is: (A) violent flexion and abduction of the head to the right; (B) violent extension and abduction of the head to the left; (C) violent depression of the right shoulder; (D) violent drawing back of the right shoulder.

15. Following prolonged treatment of a severely infected tendon sheath in the hand, an adult patient develops a clinical fibrous ankylosis of the shoulder on the same side. This is most commonly the result of: (A) metastatic infection; (B) errors of omission in the treatment of the finger; (C) subdeltoid bursitis; (D) Sudeck's atrophy.

16. The cause of traumatic subdural hematoma is always: (A) a fracture of the skull; (B) an extensive head in-

—Continued on page 71a

in severe colds • raises spirits • suppresses symptoms

CORICIDIN FORTÉ

CAPSULES



Fortification of the classic CORICIDIN formula with augmented cold control factors assures widespread symptomatic relief even in the most severe colds:

Vitamin C—fights stress of infection

Methamphetamine—stems depression and fatigue

Antihistamine—optimal symptomatic relief from full antihistamine dosage

each CORICIDIN® forté Capsule provides:

Chlorpropenpyridamine maleate	4 mg.
Salicylamide	190 mg.
Phenacetin	130 mg.
Caffeine	30 mg.
Ascorbic acid	50 mg.
Methamphetamine hydrochloride	1.25 mg.

Packaging: Bottles of 100 and 1000 capsules.

Schering

EN-2-611

"all-over" comfort
for the "all-over" cold





Schering
CORICIDIN
with **PENICILLIN**
tablets (150,000 units)

to simplify
the complicated cold

Coricidin is a brand of ampicillin-sulbactam. 150,000 units

to side-step complications for
quicker recovery from colds

CORICIDIN with PENICILLIN

TABLETS

(150,000 units Penicillin G Procaine)

while relieving cold symptoms

By means of the well-established analgesic-antipyretic-antihistaminic action of CORICIDIN, fever is controlled, chills and headache suppressed and general malaise alleviated. The superior antihistaminic component aids especially in controlling the allergic-like syndrome of congestion, sneezing and lacrimation.

check bacterial infection...

The added penicillin provides oral antibiotic action to hold infection in check and accelerate recovery, especially in patients with lingering colds. By control of the pathogens most frequently implicated in cold complications, sinusitis, pharyngitis, tonsillitis, adenitis, otitis media, bronchitis, tracheitis, laryngitis and pneumonia usually may be avoided.

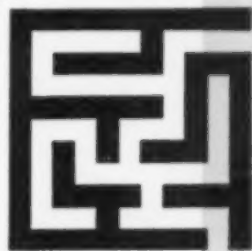
Each CORICIDIN with Penicillin Tablet contains:

Penicillin G procaine	150,000 units
Chlorphenpyridamine maleate	2 mg.
Aspirin	0.15 Gm.
Phenacetin	0.12 Gm.
Caffeine	0.03 Gm.

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CORICIDIN with Penicillin Tablets, bottles of 24 and 100.

CORICIDIN,® brand of analgesic-antipyretic.



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calmer days
...more restful
nights
beginning
first day of
treatment



You can avoid prolonged waiting for a cumulative response to reserpine alone when you start your anxiety and mild hypertension patients on Nembu-Serpin, fast-acting tranquilizer-antihypertensive.

Through the synergistic action of Nembutal® and reserpine, Nembu-Serpin helps patients experience a new sense of calm and well-being—yet keeps their drive and energy—from the very first day of treatment.

And fast-acting Nembu-Serpin makes lower reserpine dosages effective, reduces the incidence of side effects. Each Filmtab combines 30 mg. Nembutal (Pentobarbital, Abbott) Calcium and 0.25 mg. reserpine.

Nembu-Serpin®

for milder cases/for maintenance therapy: Nembu-Serpin is now available in $\frac{1}{6}$ strength, combining just 15 mg. Nembutal Calcium and 0.1 mg. reserpine in each Filmtab.

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new

a new measure

in therapy

of overweight

PRELUDIN®

(brand of phenmetrazine hydrochloride)

... reduces risk in reducing

A totally new development in anorexic therapy, PRELUDIN substantially reduces the risks and discomfort in reducing.

Distinctive in its Chemistry: PRELUDIN is a totally new compound of the oxazine series.

Distinctive in Effectiveness: In three years of clinical trials PRELUDIN has consistently demonstrated outstanding ability to produce significant and progressive weight loss through voluntary effortless restriction of caloric intake.

Distinctive in Tolerance: With PRELUDIN there is a notable absence of palpitations or nervous excitement. It may generally be administered with safety to patients with diabetes or moderate hypertension.

For your patient's greater comfort: PRELUDIN curtails appetite without destroying enjoyment of meals...causes a mild evenly sustained elevation of mood that keeps the patient in an optimistic and cooperative frame of mind.

Recommended Dosage: One tablet two or three times daily taken one hour before meals. Occasionally smaller dosage suffices.

PRELUDIN® (brand of phenmetrazine hydrochloride). Round, square, pink tablets of 25 mg. Under license from C. H. Boehringer Sohn, Ingelheim.



GEIGY PHARMACEUTICALS
Division of Geigy Chemical Corporation • Ardsley, N. Y.

GEIGY

jury; (C) a severe or mild head injury; (D) a tear in the middle meningeal artery.

17. An alcoholic patient with a three-inch laceration of the scalp is found on the street. In treating the laceration, it is most important to: (A) cleanse the wound, sprinkle sulfa powder in it, suture it and drain it; (B) thoroughly cleanse, debride and suture the wound; (C) palpate the skull for fracture before closing the wound; (D) debride the scalp edges.

18. A patient falls down the subway stairs. He is a little dazed but gets up and rides home. Two hours later he becomes drowsy and develops a left hemiplegia. You see him three hours after the accident. He is then comatose and has a contusion of the scalp. The method of treatment should be: (A) immediate operation; (B) immediate air studies to see if an expanding blood clot is present and localizing it; (C) complete bed rest, dehydration, and lumbar puncture; (D) observation for localizing signs; x-ray of the skull.

19. Immediate loss of all motor and sensory power below the level of a spinal cord lesion resulting from a fracture dislocation of a cervical vertebrae would indicate the presence of: (A) permanent complete cord injury; (B) hematomyelia; (C) doubtful permanent complete cord injury; (D) partial cord injury.

20. Treatment of acute fracture dislocation of the cervical vertebrae with cord compression should be treated by: (A) plaster jacket; (B) traction and possibly later laminectomy; (C) extension in bed with careful nursing and observation; (D) immediate laminectomy.

21. Epileptic seizure of the Jacksonian type beginning in a man of thirty years would most likely be of: (A) idiopathic origin; (B) hereditary origin; (C) functional origin; (D) organic origin.

22. A patient received a gunshot wound of the upper third of the arm, and has since suffered with intense burning pain over the posterior aspect of the thumb and first dorsal interosseus space. The pain was relieved temporarily by novacaine block of the stellate ganglion. He is most likely suffering from: (A) causalgia of the median nerve; (B) causalgia of the radial nerve; (C) severance of a nerve; (D) vascular injury.

23. A sixty year old male severely contused his right hand. The skin and soft parts were not split open. X-ray revealed a simple oblique fracture of the shaft of the second metacarpal with no displacement. The one of the following which is the preferred treatment is: (A) immobilization in extension in plaster cast; (B) partial mobilization over a roller bandage; (C) complete mobility

—Concluded on page 71a



for a tiny tarzan...

comprehensive protection

Deca-Vi-Sol®

the dropper-dose member of the Mead Johnson
DECA vitamin family

10 nutritionally significant vitamins • delicious fruit flavor • no unpleasant aftertaste • assured stability including B₁₂ • full dosage assured—can be dropped directly into baby's mouth • no refrigeration required • in 15 cc., 30 cc. and economical 50 cc. bottles with calibrated, unbreakable plastic 'Safti-Dropper'

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MEAD JOHNSON

SYMBOL OF SERVICE IN MEDICINE

of hand and fingers; (D) immobilization with finger traction.

24. A simple fracture through the mid-part of the left carpal scaphoid, without displacement of fragment, in a twenty-year-old male showed no x-ray evidence of healing following adequate plastic immobilization for a two-month period. The immediate subsequent treatment of choice would be: (A) to remove cast and institute motion; (B) continued adequate immobilization in plaster; (C) drilling across fracture site; (D) insertion of bone peg.

25. A man injured his right hand. X-ray revealed a simple fracture through the neck of the fifth metacarpal. Of the following, the preferred treatment would be: immobilization with: (A) the fifth finger held in semiflexion; (B) straight finger traction; (C) digit in hyperextension; (D) the metacarpal phalangeal joint flexed to a ninety degree (90°) angle.

26. In the Wolff-Parkinson-White syndrome, the paroxysmal tachycardia which occurs usually has its origin in: (A) His's bundle; (B) the ventricles; (C) Kent's bundle; (D) the auricles.

27. In chronic constrictive pericarditis the end diastolic filling pressure in the right ventricle, compared to normal, is: (A) decreased; (B) the same; (C) increased; (D) variable.

28. The one of the following effects

which the preoperative preparation of the hyperthyroid patient with thiouracil alone produces is that it: (A) increases the vascularity of the thyroid gland; (B) increases the basal metabolic rate; (C) diminishes the vascularity of the thyroid gland; (D) has no effect on the vascularity of the thyroid gland.

29. Of the following, the one in which fever with recurring skin lesion simulating erythema-nodosum is most commonly seen is: (A) paratyphoid infections; (B) chronic meningococcus sepsis; (C) malaria; (D) lymphogranuloma venereum.

30. Erysipelas is commonly associated with infection by: (A) staphylococcus aureus; (B) *H. influenzae*; (C) *escherichia coli*; (D) streptococcus hemolyticus.

31. The one of the following conditions in which the basal metabolic rate is not likely to be elevated is: (A) metastatic carcinoma of the cervical lymph glands; (B) Hodgkin's disease; (C) lymphosarcoma; (D) acute lymphatic leukemia.

32. Of the following results, the one which is obtained after a section of the vagus nerves for peptic ulcer is that it: (A) increases nocturnal secretion in the stomach; (B) increases the motility of the stomach; (C) diminishes the nocturnal secretion from the stomach; (D) has no effect on the nocturnal secretion of the stomach.

In a series of 120 patients with diverse complaints such as gas, bloating, nausea, cramps, etc. referable to the g.i. tract, Olson¹ obtained "rapid symptomatic relief" in 92 cases with COACTYN, a new pH-adjusted phosphorated carbohydrate solution containing homatropine methylbromide and phenobarbital.

Significantly, in those cases which were functional in nature, the relief obtained was "more satisfactory than with usual antispasmodic or anticholinergic medications."

AND

"When Coactyn did not afford relief from symptoms, further diagnostic procedures in most instances revealed organic lesions of the g.i. tract."

ABSTRACT OF CASE REPORT

A 42-year-old white female complained of severe gas and bloating after eating "almost anything." She had had a cholecystectomy. Abdominal distention was so marked as to raise the question of pregnancy. Cramping became so severe that parenteral anticholinergics were sometimes required, with but partial relief. A g.i. series revealed only hypermotility and spasticity of the entire g.i. tract. Among the drugs which had been tried were estrogens, sedatives, almost all of the available antispasmodics, and numerous alkaline buffering agents. None gave satisfactory relief. Administration of COACTYN resulted in "almost complete alleviation of symptoms." The patient was able to tolerate a better balanced diet. The author calls attention to the "topical" antispasmodic effect of the pH-adjusted phosphorated carbohydrate solution.

FORMULA:

Each teaspoonful contains 0.5 mg. homatropine methylbromide and 8 mg. phenobarbital in a phosphorated carbohydrate solution with the pH of the entire preparation adjusted at an optimally effective level. Alcohol 9.5%. Pleasantly apricot-flavored.

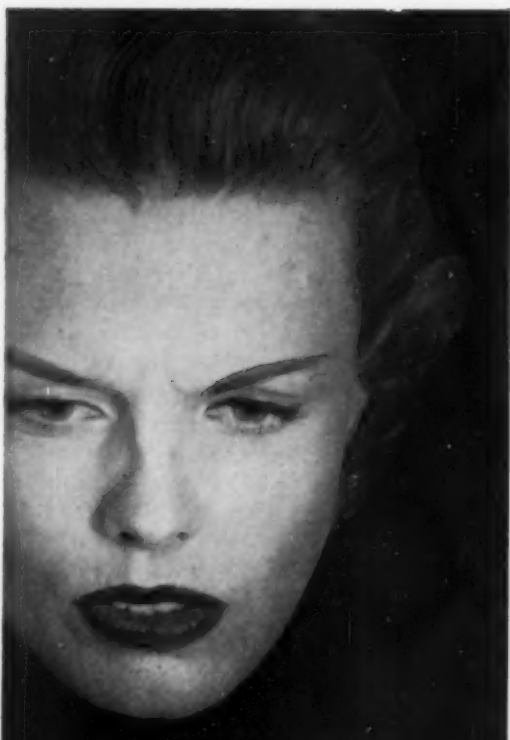
DOSAGE:

1 or 2 teaspoonfuls, undiluted, 15 minutes before meals; additional doses if necessary.

SUPPLIED:

Bottles of 3 fl.oz. and 16 fl.oz.

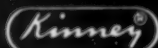
1. Olson, J. A.: *Am. J. Digest. Dis.*, Nov., 1955.



NEW...

a faster-acting
more effective
spasmolytic

Coactyn[®]



KINNEY & COMPANY, INC.

Columbus, Indiana

extra protection
for every conception

Hesper-C Prenatal

with capillary-protective factors

*a precaution in normal pregnancy
a necessity in habitual abortion^{1,2}*

The problem of spontaneous abortion is not limited to habitual aborters. It is estimated that 10% to 20% of *all* pregnancies end in spontaneous abortion. Studies by Greenblatt,^{1,3} Javert^{4,5} and Dill² have revealed that integrity of the decidual vessels is a key to successful completion of pregnancy... and confirm that hesperidin complex and ascorbic acid, provided by Hesper-C Prenatal, restore and maintain capillary integrity.^{6,7}

In several groups of habitual aborters, these researchers effected substantial fetal salvage—as high as 95% in one series⁴—when Hesper-C (hesperidin complex and ascorbic acid) was added to a regimen of prenatal supplementation and therapy.

Only Hesper-C Prenatal gives your patients the extra protection of hesperidin complex and ascorbic acid, plus the established prenatal vitamin-mineral supplementation, at a nominal increase in daily cost.

Hesper-C Prenatal is the only *complete* supplement for *all* your pregnant patients.

Each capsule contains:

Hesperidin Complex	100 mg.
Ascorbic Acid	100 mg.
Vitamin A Acetate	1000 U.S.P. units
Vitamin D ₂	200 U.S.P. units
Thiamine Mononitrate	1.25 mg.
Riboflavin	0.75 mg.
Nicotinamide	5.0 mg.

Vitamin B ₁₂	0.75 micrograms
Folic Acid	0.95 mg.
Pyridoxine Hydrochloride	1.67 mg.
Calcium Pantothenate	1.0 mg.
Ferrous Gluconate (2.5 mg. iron)	21.6 mg.
Calcium Carbonate (83.3 mg. calcium)	208.25 mg.
Copper Sulfate (0.5 mg. copper)	2.0 mg.
Potassium Iodide (0.05 mg. iodine)	0.065 mg.

In bottles of 100 and 500 capsules.

Recommended daily dose: Two capsules t.i.d.

Providing the daily requirements or more of vitamins and iron during pregnancy as recommended by the National Research Council.

References: 1. Greenblatt, R. B.: *Obst. & Gynec.* 2:550, 1953. 2. Dill, L. V.: *M. Ann. District of Columbia* 23:667, 1954. 3. Greenblatt, R. B.: *Ann. New York Acad. Sc.* 61:713, 1955. 4. Javert, C. T.: *Obst. & Gynec.* 3:420, 1954. 5. Javert, C. T.: *Ann. New York Acad. Sc.* 61:700, 1955. 6. Barishaw, S. B.: *Exp. Med. & Surg.* 7:358, 1949. 7. Selsman, G. J. V., and Horoschak, S.: *Am. J. Digest. Dis.* 17:92, 1950.

Products
of Original
Research



THE NATIONAL DRUG COMPANY
Philadelphia 44, Pa.



Tastiest way to dissolve sore throat symptoms



(HYDROCORTISONE-BACITRACIN-TYROTHRIN-
NEOMYCIN-BENZOCAIN TROCHES)

Adult or juvenile, your patients with sore throats will welcome a course of HYDROZETS. These newest Merck Sharp & Dohme troches offer anti-inflammatory, anti-infective and analgesic properties that promptly alleviate distressing mouth or throat irritation whether caused by infection, mechanical injury or allergic reaction. And HYDROZETS taste so good, it's hard to believe they're medicine.

Formula: Each HYDROZETS Troche contains — 2.5 mg. 'HYDROCORTONE' to reduce pain, heat and swelling; 50 units Zinc Bacitracin, 1 mg. Tyrothricin and 5 mg. Neomycin Sulfate to combat gram-positive and gram-negative bacteria; and 5 mg. Benzocaine for rapid soothing analgesia. **Other indications:** As adjunct therapy in aphthous ulcers, acute and chronic gingivitis and Vincent's infection.

Supplied: Vials of 12 troches.



MERCK SHARP & DOHME
DIVISION OF MERCK & CO., INC. PHILADELPHIA 1, PA.

MODERN MEDICINALS

These brief resumes of essential information on the newer medicinals, which are not yet listed in the various reference books, can be posted on file cards and a record kept. This file can be kept by the physician for ready reference.

Achrocidin Syrup, Lederle Laboratories Division, American Cyanamid Co., New York, New York. Lemon-lime flavored preparation, each 5 cc. of which contains achromycin tetracycline HCl 125 mg., phenacetin 120 mg., salicylamide 150 mg., ascorbic acid (C) 25 mg., pyrilamine maleate 15 mg., methylparaben 4 mg., and propylparaben 1 mg. Indicated for control of most bacterial infections that complicate the common cold, also to relieve headache, muscular aches and pains, fever, nasal discharge, excessive mucous and chest congestion. **Dose:** For adults, two teaspoonfuls 3 or 4 times daily for 3 to 5 days. For children, as directed by physician. **Sup:** Bottles of 4 oz.

Achromycin Topical Spray, Lederle Laboratories Division, American Cyanamid Co., New York, New York. Spray each 3 oz. of which contains 710 mg. tetracycline HCl. Indicated for prevention of infection in minor skin cuts and abrasions. **Use:** Spray on affected area. **Sup:** 3 oz. aerosol spray applicator.

Adenoplex, U. S. Standard Products Company, Mount Prospect, Illinois. An injectable, each cc. of which pro-

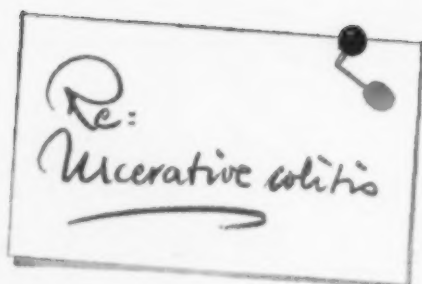
vides adenosine 5-monophosphate 25 mg., cyanocobalamin 50 mcg., niacin 25 mg., and thiamine hydrochloride 10 mg. Indicated for relief of symptoms in varicose vein complications, thrombophlebitis, phlebectomy, bursitis, tendinitis, osteoarthritis, polyneuritis. Also pruritis ani, valvae, etc. **Dose:** Inject intramuscularly starting with 1 cc daily until relief is obtained, then 1 cc 2 or 3 times weekly, as required. **Sup:** 10 cc. multiple-dose vials.

Bivam, U. S. Vitamin Corporation, New York 17, New York. Tablets containing a combination of citrus bioflavonoids (water-soluble), vitamins, and minerals. Affords new 3-dimensional comprehensive nutritional protection. **Dose:** 1 tablet t.i.d. with meals, or more as indicated. **Sup:** Bottles of 100, 300, and 1000.

Convertin-H, B. F. Ascher & Co., Inc., Kansas City, Missouri. A tablet containing homatropine methylbromide 2.5 mg., betaine hydrochloride 130 mg., oleoresin ginger 1/600 gr., pancreatin equiv. 250 mg. U.S.P., and desoxycholic acid 50 mg. Indicated in the treatment of nervous indigestion.

—Continued on page 82a

This is "the most valuable drug that has been introduced for the treatment of ulcerative colitis" in recent years.¹ Results of treatment with Azulfidine "far exceed those of any previous drug used".² "It has been effective in controlling the disease in approximately two-thirds of patients who had previously failed to respond to standard colitis therapy currently in use."³



Azulfidine
BRAND OF SALICYLAZOSULFAPYRIDINE

1. BARGEN, J. A.: "Present Status of Hormonal and Drug Therapy of Ulcerative Colitis", *South. M. J.* 48: 192 (Feb.) 1955.
2. BARGEN, J. A. and KENNEDY, R. L. J.: "Chronic Ulcerative Colitis in Children", *Postgrad. Med.* 17: 127 (Feb.) 1955.
3. MORRISON, L. M.: "Response of Ulcerative Colitis to Therapy with Salicylazosulfapyridine", *J. A. M. A.* 151: 366 (Jan. 31) 1953.

PHARMACIA LABORATORIES, INC.
501 Fifth Avenue, New York 17, N. Y.

in
pyelonephritis
delay is
dangerous...



FURADANTIN®

BRAND OF NITROFURANTOIN

first...
for rapid eradication of infection

In the majority of 112 cases of acute, persistent or relapsing urinary tract infections "nitrofurantoin [FURADANTIN] was effective clinically, with a pronounced improvement, indicated by the appearance of the urine as well as by verbal commendation by the patient, within 24 to 36 hours... Some of these patients with seemingly impossible cases were cured of their infection."*

FURADANTIN *first* because of these advantages: a specific for urinary tract infections • rapid bactericidal action • negligible development of bacterial resistance • nontoxic to kidneys, liver and blood-forming organs.

AVERAGE DOSAGE: ADULTS—four 100 mg. tablets daily; 1 tablet during each meal and 1 on retiring, with food or milk. In acute, uncomplicated infections, 50 mg. q.i.d. may be prescribed. If patient is unresponsive after 2 to 3 days, increase dose to 100 mg. q.i.d.

CHILDREN—5 to 7 mg. per Kg. (2.2 to 3.1 mg. per lb.) per 24 hours.

SUPPLIED: Tablets, 50 and 100 mg. Oral Suspension (25 mg. per 5 cc. tsp.).

*Stewart, B. I., and Brown, H. J. J. Am. M. Ass. 140:1221, 1956.



EATON LABORATORIES, NORWICH, NEW YORK

Nitrofurans—a new class of antimicrobials—neither antibiotics nor sulfonamides



IN LOW BACK PAIN...

**REDUCES SPASM
IMPROVES FUNCTION**

"...17 of the 20 patients with post-traumatic muscle spasm of the low back had excellent or good responses."¹

"In acute and chronic recurrent low back syndrome, seven of eight patients showed visible objective improvement."²

1. Wallace, S. L.: Zoxazolamine (FLEXIN) in Low Back Disorders, to be published. 2. Settel, E.: FLEXIN in Geriatric Skeletal Muscle Spasm, Am. Pract. & Digest Treat., in press.

Available: Tablets, Engestec Coated, pink, 250 mg.; bottles of 36. Tablets, scored, yellow, 250 mg.; bottles of 50.

*U. S. Patent Pending

McNEIL

McNeil Laboratories, Inc. • Philadelphia 32, Pa.

00007



flexin[®]

(Zoxazolamine, [®] McNeil)

engestic[®] coated or plain

IN TROPICAL INFESTATIONS

spastic colitis, constipation, gallbladder dysfunction, mild diabetes, psoriasis and disorders of fat metabolism. **Dose:** One or two tablets with or just after meals. **Sup:** Bottles of 84 and 500.

Cordex Buffered Tablets, Upjohn Company, Kalamazoo 99, Michigan. Companion product to Cordex Tablets, differing in that each tablet contains 200 mg. of calcium carbonate, the buffering agent. Indications and dosage are the same as for Cordex Tablets. **Sup:** Bottles of 100 and 500.

Cordex Forte Buffered Tablets, The Upjohn Company, Kalamazoo 99, Michigan. Companion product to Cordex Forte Tablets, containing, in addition, 200 mg. of calcium carbonate. Indications and dosage are the same as for Cordex Forte. **Sup:** Bottles of 100 and 500.

Cytoferrin Liquid, Ayerst Laboratories, New York 16, New York. New dosage form, containing in each 10 cc, ferrous sulfate USP 200 mg., ascorbic acid 150 mg. Indicated especially for pediatric therapy to enable greater iron absorption. **Dose:** As directed by physician. **Sup:** Bottles of 8 oz.

Doxinate 240 mg., Lloyd Bros., Cincinnati 3, Ohio. Yellow transparent capsule containing optimal dosage form of dioctyl sodium sulfo-succinate for effective fecal softening. **Dose:** Adults, one capsule daily. **Sup:** Bottles of 15 and 100.

Mandelamine Suspension, Nepera Laboratories Division, Yonkers, New York. New oral dosage form contain-

ing in each 5 cc. Mandelamine 250 mg., suspended in sesame oil and pleasantly flavored. Indicated in all types of urinary tract infections, primarily for pediatric use. **Dose:** Children under 18 month of age, $\frac{1}{2}$ teaspoonful q.i.d., children over 18 months 1 teaspoonful q.i.d., adults 1 tablespoonful q.i.d. **Sup:** Bottles of 4 oz.

Medihaler-Phen, Riker Laboratories, Inc., Los Angeles, California. Inhalant containing phenylephrine HCl 3.6 mg., neomycin sulfate 1.5 mg., and hydrocortisone 0.6 mg. in an inert repellent. Indicated for use as a decongestant, antibacterial and anti-inflammatory therapy in rhinitis (acute infectious, allergic, vasomotor and hypertrophic), sinusitis and nasopharyngitis. **Dose:** One inhalation in each nostril. Wait at least 5 minutes. Second inhalation may be taken if needed. Dose may be repeated every 2 to 3 hours for severe congestion. **Sup:** 10 cc. vial with nasal adapter.

Neo-Hydeltrol 0.5% Ophthalmic Solution, Merck Sharp & Dohme, Division of Merck & Co., Inc., Philadelphia 1, Pennsylvania. Non-irritating buffered solution, containing in each cubic centimeter Prednisolone 21-phosphate 5.0 mg., and Neomycin Sulfate (equivalent to 3.5 mg. neomycin base) 5.0 mg. Indicated for effective management of many disease processes of the anterior segment of the eye, such as keratitis, phlyctenular keratoconjunctivitis, iritis, ophthalmic herpes zoster, allergic conjunctivitis, corneal injuries. **Dose:** By drops into the conjunctival sac as directed by physician. **Sup:** Sterile bottles of 5 cc.

—Continued on page 84a

IN TOPICAL INFECTIONS

for...

specific action
against the entire
range of bacteria
most often found in
topical lesions

NEO-POLYCN^{*}
NEOMYCIN-BACITRACIN-POLYMYXIN OINTMENT

provides the
preferred topical
antibiotics...

**NEOMYCIN
BACITRACIN
POLYMYXIN**

plus...

the unique **Fuzene[®]** base
which releases
high antibiotic
concentrations
not obtained
with grease-base
ointments

NEO-POLYLCIN*

meets the criteria for the ideal topical agent

Effective against the entire range of bacteria most often found in topical lesions...low index of sensitization...non-irritating to tissue...active in presence of blood and pus...diffuses readily into tissue exudates.

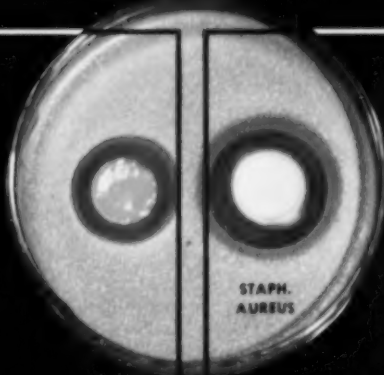
Neo-Polycin Ointment contains 3 mg. of neomycin, 400 units of bacitracin, and 8000 units of polymyxin B sulfate, per Gm. in the unique Fuzene base.

Supplied in 15 Gm. tubes.

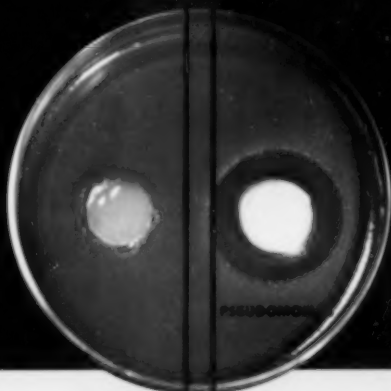
*Trademark

*and its special FUZENE base releases
more neomycin...more bacitracin and more polymyxin
than ordinary grease-base ointments*

Here is visible evidence of the limited release of neomycin, bacitracin, and polymyxin from a grease-base ointment.



Here is visible evidence of the greater release of these same antibiotics from Neo-Polycin.



In agar plate tests where Neo-Polycin is compared with a grease-base ointment containing the same antibiotics, comparative zones of inhibition demonstrate the greater release of antibiotics by Neo-Polycin.

PITMAN-MOORE COMPANY

Division of Allied Laboratories, Inc.

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who coughed?

**WHENEVER
COUGH THERAPY
IS INDICATED**

Hycodan[®]

(Dihydrocodeinone with Homatropine Methylbromide)

Relieves cough quickly and thoroughly • Effect lasts up to six hours permitting a comfortable night's sleep • Controls useless cough without impairing expectoration • Rarely causes constipation

Syrup and oral tablets. Each teaspoonful or tablet of Hycodan[®] contains 5 mg. dihydrocodeinone bitartrate and 1.5 mg. MESOPIN.[†] Average adult dose: One teaspoonful or tablet after meals and at bedtime. May be habit-forming. Available on your prescription.

ENDO LABORATORIES INC.

Richmond Hill 18, New York

[†]brand of homatropine methylbromide

Endo[®]

U. S. Pat. 2,630,400

Neo-Slowten, The E. L. Patch Company, Stoneham 80, Massachusetts. White scored tablets, each containing phenobarbital 16.2 mg., reserpine 0.1 mg., and thiamine hydrochloride 5 mg. Indicated in the treatment of anxiety, insomnia, agitation, mild hypertension and various states of emotional tension. **Dose:** As directed by physician. **Sup:** Bottles of 100 and 1000.

Pacatal, Warner-Chilcott Laboratories, Morris Plains, New York. Mepazine, a derivative of phenothiazine, chemically related to chlorpromazine, and promazine. For use in treatment of mentally ill. Described as the treatment of choice in a variety of psychoses. Administered synergistically in combination with chlorpromazine. Pacatal also makes possible reduction of dosage and elimination of side effects of both drugs. **Dose:** As directed by physician. **Sup:** Tablet form, 25 mg. or 50 mg. in bottles of 100 and 500, 100 mg. in bottles of 500. Ampules, 2 cc in boxes of 10 and 50.

Pantho-F 0.2% Cream, U. S. Vitamin Corp., New York 17, New York. Lower-strength dosage form of Pantho-F Cream containing 0.2% hydrocortisone with 2% pantothenylol. Indicated for skin disorders in treatment of extensive skin areas or where therapy is long continued. **Application:** Clean affected area, then gently rub in a small amount of cream 2 or 3 times daily or as required. **Sup:** Tubes of 15 Gm. and 2 oz., Jars of 1 lb.

Placidyl Capsules 100 and 200 mg., Abbott Laboratories, North Chicago, Illinois. New dosage form of Ethchlorvynol, Abbott. Indicated in treatment

of nervous or muscular tension, mild anxiety or excitement and in simple insomnia resulting from these conditions. **Dose:** As directed by physician. **Sup:** Bottles of 100 and 1000.

Plaquenil Sulfate Tablets 200 mg.

Winthrop Laboratories, New York 18, New York. Brand of hydroxychloroquine sulfate. For the treatment of (1) Lupus erythematosus; chronic discoid, localized edematous or subacute types; (2) polymorphic light eruptions; (3) malaria due to Plasmodium falciparum and P. vivax; (4) G. lamblia infection. **Dose.** For lupus erythematosus and polymorphic light eruption—initially an average adult dose of 400 mg. once or twice daily. This may be continued for several weeks or months, depending upon the response of the patient. For prolonged maintenance therapy a smaller dose (200 to 400 mg. daily) will frequently suffice. For malaria—adults, initially dose of 800 mg. followed by 400 mg. in from six to eight hours and 400 mg. on each of two successive days (total 2 Gm.). An alternative method consisting of a single 800 mg. dose has been employed successfully. Smaller doses are recommended for children. For Giardiasis—200 mg. three times daily for 5 days. **Sup:** Bottles of 100.

Rapacodin, Bilhuber-Knoll Corp., Orange, New Jersey. New name for Paracodin (dihydrocodeine bitartrate). Rapacodin and Paracodin may be used interchangeably—only the name has been changed.

Rarical Iron-Calcium W/Vitamins, Ortho Pharmaceutical Corp., Raritan, N. J. Tablets, each containing ferrous calcium citrate with tricalcium citrate

—Continued on page 88a

IN ADVANCE



in the treatment of vaginitis

new...simple...effective...topical therapy

Clinical evidence shows Sterisil Vaginal Gel to be highly effective not only against *Trichomonas* and *Monilia*, but against the newly discovered pathogen *Hemophilus vaginalis* (now believed to be the etiologic organism most frequently responsible for so-called "non-specific" vaginitis and leukorrhea).*

High tissue affinity of Sterisil assures prolonged antiseptic action; vaginal secretions are less likely to remove Sterisil from the site of application. Sterisil is also more convenient for the patient. Fewer applications are required for successful treatment.

Acceptable to patients, Sterisil Vaginal Gel is easily applied, won't leak or stain, requires no pad. Signs of local or systemic toxicity or sensitization have not been reported.

Dosage: One application every other night until a total of 6 has been reached. This treatment may be repeated if necessary.

Supplied in 1½ oz. tube with 6 disposable applicators. Instructions for use are included with each package.

*Gardner, H. L., and Duker, C. D.: Am. J. Obst. & Gynec. 69:962 (May) 1955.

STERISIL[®] VAGINAL GEL

Brand of hexetidine

WARNER-CHILCOTT



The Name to Remember **RIB-BACK**

To the Profession it has served with undivided responsibility for so many years . . . BARD-PARKER has devoted its scientific knowledge and the inimitable skill of its craftsmen in developing the finest surgical blade possible . . . a blade that meets the demand of the Profession for quality and economy.

The satisfaction of knowing you have chosen the best is yours when you use B-P RIB-BACK blades.

It's Sharp

Ask your dealer

BARD-PARKER COMPANY, INC.
Danbury, Connecticut

UNIFORMLY SHARP

**RIGID
STRONG**

the 'only' RIB-BACK BLADE



so much easier to use for dandruff

that patients can hardly fail to benefit...

SEBIZON

LOTION

simple as A-B-C, day or night routine

A—apply

B—rub in

C—brush off, or rinse off if desired

no complicated

shampoo or timing

procedures

effective in dry or oily dandruff

itching and stinging

scaling and crusting

oiliness of scalp

all respond quickly

to

SEBIZON

Available on Rx only in 3 oz. plastic squeeze tube

Sebizon,® (antidandruff preparation) contains

10% Sulfacetamide Sodium U.S.P.

Schering

Kenilworth, N.J.



500 mg., calcium 85 mg., iron 25 mg., plus a combination of vitamins. Indicated as an improved source of iron and calcium with essential vitamins for the supplementary dietary needs of pregnancy and lactation. **Dose:** One tablet 3 times a day with meals, or as directed by physician. **Sup:** Bottles of 100 and 1000.

Spray-Band, Schueler & Company, New York, New York. Antibiotic wound dressing containing tyrothricin. Indicated in treatment of burns, scalds, cuts, abrasions, lacerations, blisters, athlete's foot, ringworm and minor skin irritations. **Use:** Spray on

affected area. **Sup:** 6 oz. aerosol spray-on container.

Synacol, Reed & Carnrick, Jersey City 6, New Jersey. A capsule containing scopolamine methylbromide 1 mg., guar gum 420 mg., and dioctyl sodium sulfosuccinate 20 mg. Indicated in the treatment of spastic constipation, mucous colitis or functional diarrhea. **Dose:** Initially—two capsules 2, 3 or 4 times daily as necessary with full glass of water. When normal elimination patterns are restored, dosage may be reduced. Contraindicated in patients with glaucoma. **Sup:** Bottles of 50.

—Concluded on page 96a

with antibiotics

one of many indications for

Myadec®

high potency vitamin-mineral formula

"The necessary use of antibiotics, sulfonamides and other drugs calls for nutritional measures to offset their antimetabolic effect."^{*}

MYADEC Capsules are supplied in bottles of 30, 100, 250, and 1,000.

^{*}Carnegie, D. G., in Mont, M. G., & Goussard, R. S.: *Modern Nutrition in Health and Disease*, Philadelphia, Lea and Febiger, 1955, p. 835.

PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN

*In deference to
her daintiness...*

- Massengill Powder is buffered to *maintain** an acid condition in the vaginal mucosa. It is more effective than vinegar and simple acid douches.

- Massengill Powder has a low surface tension which enables it to penetrate into and cleanse the folds of the vaginal mucosa.

- Massengill Powder has a "clean" antiseptic fragrance. It enjoys unusual patient acceptance.

- Massengill Powder solutions are easy to prepare. They are nonstaining, mildly astringent.



massengill powder[®]

when recommending a vaginal douche

Indications:

Massengill Powder solutions are a valuable adjunct in the management of monilia, trichomonas, staphylococcus, and streptococcus infections of the vaginal tract. Routine douching with Massengill Powder solution minimizes subjective discomfort and maintains a state of cleanliness and normal acidity without interfering with specific treatment.

*In a recent clinical report, ambulatory patients—with an alkaline vaginal mucosa resulting from pathogens—maintained an acid vaginal mucosa of pH 3.5 for 4 to 6 hours after douching with

Massengill Powder; recumbent patients maintained a satisfactory acid condition up to 24 hours.

*Arnot, P.H.: *West. J. Surg., Obs., and Gyn.* 62:85

Generous samples on request.

The S. E. MASSENGILL Company

Bristol, Tennessee

New York

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NEW...

RELIEVES ANXIETY AND TENSION

RELIEVES JOINT INFLAMMATION

RELIEVES DISCOMFORT AND DISABILITY

RELIEVES MUSCLE SPASM

ME

Each Multiple Compressed Tablet of MEPROLONE provides the inseparable antiarthritic, antirheumatic benefits of:

1. *Prednisolone buffered*—the newest and most potent of the "predni-steroids" for prompt relief of joint pain and arrest of the destructive inflammatory process.

2. *Meprobamate*—the newest and safest of the muscle-relaxant tranquilizers for profound relaxation of skeletal muscle in spasm.

Tolerance to this combination is good because there is little likelihood of sodium retention, potassium depletion or gastric distress with buffered prednisolone, and meprobamate rarely produces significant side effects in therapeutic dosage.

An additional important therapeutic benefit, often overlooked, stems from the tranquilizing action of meprobamate. This component of MEPROLONE relieves mental tension and anxiety so often manifest in arthritics, making them more amenable to other rehabilitation measures.

INDICATIONS: A wide variety of conditions, in which four symptoms predominate: a) inflammation b) muscle spasm c) anxiety and tension d) discomfort and disability; i.e., rheumatoid

Therapeutic benefits of MEPROLONE compared with traditional antiarthritics.

	relieves pain	suppresses inflammation	relaxes muscles	eases anxiety	imparts sense of well-being
Salicylates	✓	✓			
Muscle relaxants			✓		
Tranquilizers				✓	
Steroids	✓	✓			✓
MEPROLONE	✓	✓	✓	✓	✓
1. Meprobamate is the only tranquilizer with muscle-relaxant action.					

arthritis, rheumatoid spondylitis (Marie-Strümpell disease), Still's disease, psoriatic arthritis, osteoarthritis, bursitis, synovitis, tenosynovitis, myositis, fibrositis, fibromyositis, neuritis, acute and chronic low back pain, acute and chronic primary and secondary fibrositis and torticollis, intractable asthma, respiratory allergies, allergic and inflammatory eye and skin disorders (as maintenance therapy in disseminated lupus erythematosus, periarteritis nodosa, dermatomyositis and scleroderma).

SUPPLIED: Multiple Compressed Tablets in bottles of 100 in two formulas as follows: MEPROLONE-1—1.0 mg. of prednisolone, 200 mg. of meprobamate and 200 mg. of dried aluminum hydroxide gel. MEPROLONE-2—provides 2.0 mg. of prednisolone in the same formula.

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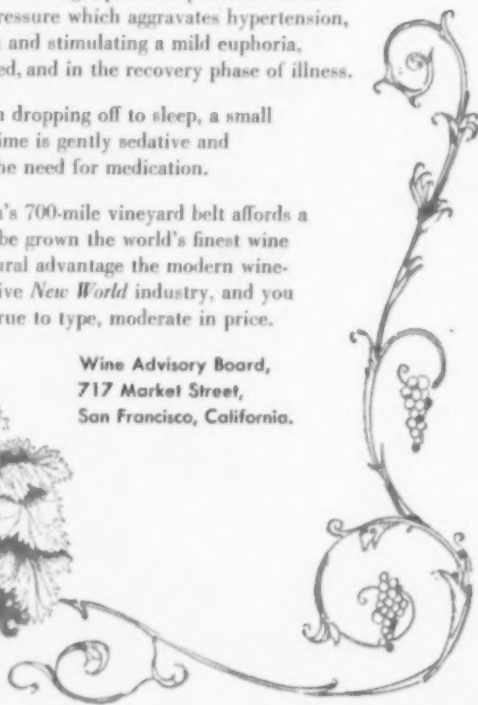
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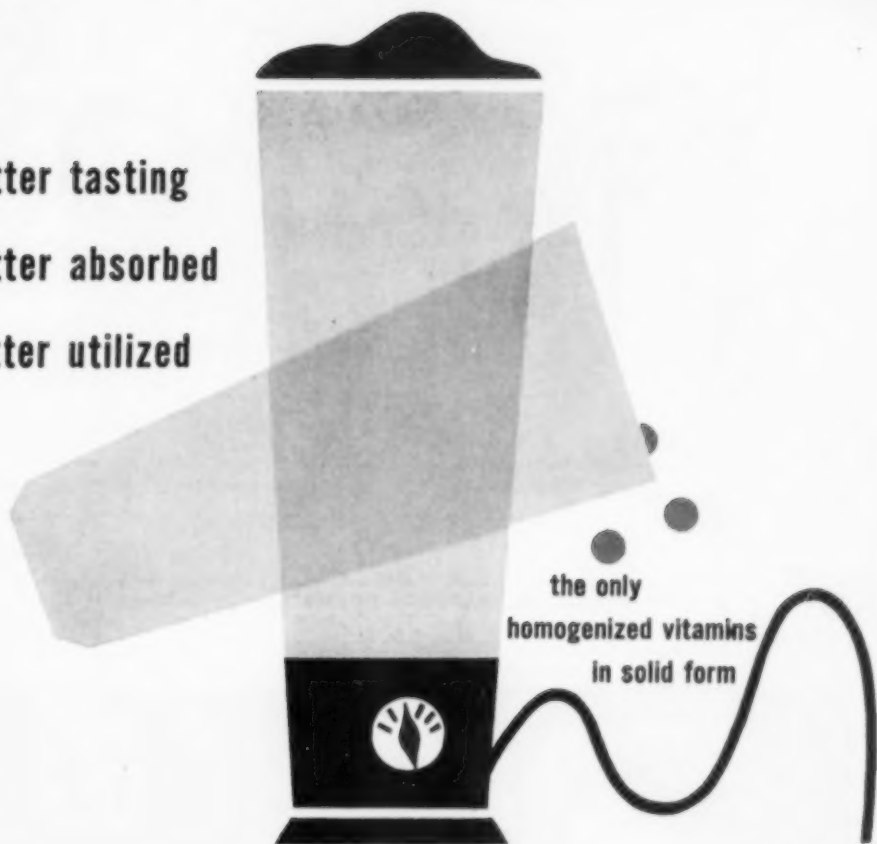
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Riboflavin (B ₂)	2.0 mg.
Nicotinamide	10.0 mg.
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Pyridoxine HCl (B ₆)	1.2 mg.
L-Lysine HCl	25.0 mg.
Cysteine HCl	5.0 mg.
Inositol	5.0 mg.
Choline*	5.0 mg.

Iron*	3.0 mg.
Calcium*	40.0 mg.
Phosphorus*	30.0 mg.
Iodine*	75.0 mcg.
Potassium*	2.5 mg.
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*Supplied as choline bitartrate, ferrous gluconate, calcium lactate and the hypophosphite, calcium hypophosphite, potassium iodide, potassium gluconate, manganous gluconate, zinc glycerophosphate and magnesium gluconate.

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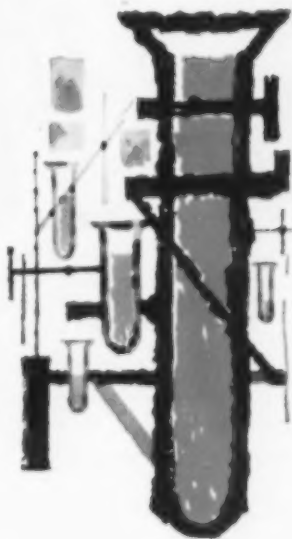
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The Treatment of Early Hypertension

PAUL WILLIAMSON, M.D.
El Paso, Texas

This is the opinion of one man, a practitioner who is not necessarily an authority on anything. As such, its only value can be as a starting point for discussion. Nonetheless, it seems high time that somebody try to make heads or tails out of the confusing mass of data (both accurate and inaccurate) with which we doctors are barraged. This is my attempt:

In the first place, a significant percentage of people who are treated as early hypertensives are not hypertensives at all. Blood pressure is a fluctuant thing. Systolic differences of 50 to 80 points during any 24 hour period are common. There is a certain tension and excitement involved when one visits the doctor. Blood pressure may be somewhat elevated (say to 160/88) by this alone.

You will have noticed that most "early hypertensives" have systolic elevations without great change in diastolic pressures. It has been fairly well proven that the principal factor involved in this systolic pressure increase is an increase in the stroke volume of the heart. Even a physician will usually have a slight quickening of the pulse while having his blood pressure taken.

Many patients are normotensives until the excitement of "going in for a blood pressure check" causes some elevation of the pressure. Therein lies the first problem. One must define in his own mind just what is meant by early hypertension before attempting to treat it. My own definition is this: "Any person, who at times of relative tranquillity, has a pressure of over 150/90 is probably an early hypertensive."

There are simple historical and physical means of proving this point but, since this is an article on treatment, we will omit them.

Having decided that the patient is an early hypertensive we are faced with a bewildering mass of drugs and therapeutic regimens all highly touted as the proper treatment. Let's begin by classifying available drugs into six groups:

1. Autonomic drugs.
2. Vasodilators (not autonomic).
3. Diuretic agents.
4. Tranquillizers.
5. Sedatives.
6. Placebos.

The drugs exerting their effect through the autonomic system are very potent hypotensive agents. As a matter of fact, they are actually dangerous if given to

full therapeutic effect. As I see it, there is no indication at all for their use in the early, moderate hypertensive. There are several reasons for this.

In the first place they do not actually treat the mechanism by which early hypertension occurs. As nearly as we can come to the truth of the matter, hypertension in its early stages is nearly always a neurogenic phenomenon. It is brought on by stress and tension.

At least half these early cases turn out to be transient or fail to progress into the more serious form of the disease. In other words, they have an excellent prognosis. To use highly dangerous autonomic drugs in these cases is somewhat akin to killing a mouse with an atomic bomb. There is just no indication for it.

As a beginning step in the treatment of early hypertension I eliminate such drugs from consideration.

Next, look at the nitrite group of vasodilators. Certainly, they are seldom dangerous to the patient's life. Yet it is necessary that they be given in full therapeutic dosage if any effect at all is to be obtained. There is a very narrow range between the effective dosage and what might be termed the "uncomfortable" dosage.

Given in less than full dose they probably have very little utility. Certainly, the nitrites do nothing to combat the cause of the difficulty. For these reasons the nitrites have little or no place in the treatment of early hypertension.

The xanthine diuretics are often prescribed in such cases — why, I am at a complete loss to explain. Their vasodilating effect is capricious. Actually, it probably is not present at all with the usual oral dosage. I am inclined to believe that this is purely placebo medica-

tion and do not use it. This is not to condemn the xanthines for they are very useful drugs in certain late hypertensives. Even so, they achieve little or nothing in the early case.

The newer tranquilizing agents would seem to be drugs that strike at the root of the problem. By acting to relieve stress and tension they should allow a physiologic lowering of the blood pressure. This they seem to do.

At the present time the drugs are expensive and they have not been in use long enough to allow a fair evaluation of the long-time effects. They may offer a slight superiority over the older methods of treatment. This superiority, to me, is not sufficient to offset the increased cost except in rare patients.

To be perfectly frank, the cost itself may have a therapeutic action in some cases. People are wonderful but many of them are great fools. Some of them consider it an honor to take the most expensive and the newest medicine. Such a person will benefit more from the newer drugs than from more commonplace routines.

The mild sedatives are the old standbys in the treatment of early hypertension. They are probably the most useful medicinal agents we have for such cases. A great many mixtures seem to depend solely on the phenobarbital they contain for their effect. I have been able to find no combination that exceeds plain phenobarbital in point of results.

Often the mild sedatives are given in dosage far too large. A quarter grain of phenobarbital three times daily is almost always ample. Quite often even less will do the work. Since phenobarbital causes mild toxic reactions with far greater frequency than most of us realize we have used other drugs in

many cases. Commonly, we begin by prescribing elixir of alurate, a half teaspoonful four times daily.

Such drugs are not a perfect means of treating the early hypertensive. No man can drown his tensions in a sea of elixir of phenobarbital for year after year and continue to call himself a rational human being. As a beginning, they represent excellent treatment.

Used wisely and intermittently they will control most cases well. There is one mistake which the physician must not make: These drugs have no curative effect at all. They mask the tensions which are at the root of the increased blood pressure and they may have some ability to dilate blood vessels. Other means of therapy are required to gain anything even resembling permanent results.

Placebos work startlingly well in early hypertensives. Any medication you give, from red milk of magnesia to ten cent vitamin capsules may show this effect. So will sugar capsules. This is one reason why we physicians must be very careful in evaluating the purported therapeutic result from any drug. In addition to this, early hypertension is a notoriously fluctuant disease. Periods of normotension are often interspersed for no obtainable reason.

One must remember, too, that early hypertension has a pronounced psychologic aspect. Any medication, no matter what kind, may be greatly beneficial because of its psychotherapeutic effect.

Actually, the drug treatment of early hypertension is workable but by no means complete. The more recent autonomic drugs are not good therapeutic weapons in these early cases. Best are the mild sedatives and these are followed closely (and may be overtaken

and supplanted) by the tranquillizing agents.

Drugs are not really even a good approach to the problem. Complete treatment of hypertension is a way of life, not a chemical regimen. Since achievement of a new way of life is a practical impossibility we can only seek to approach our treatment goals with little or no hope that we will ever achieve them.

Dietetic treatment holds no immediate promise in the treatment of this disease. Because there is some evidence that cholesterol-like fats may have a bearing on the development of arteriosclerosis it may be helpful to prescribe a diet low in these substances. Most patients will enter in upon a series of dietary restrictions with great enthusiasm but will soon abandon all pretense of sticking with it. Nothing at all is achieved. Since this is the case, diets seem to offer little but psychotherapy.

Rest is admittedly good treatment. Under enforced regimens early hypertensives sometimes show marked improvement. The treatment is not a practical one and, even if it can be done, soon loses its efficacy.

As I grow older I become more and more convinced that early hypertension is more a philosophical problem than a strictly medical one. There is a steadily increasing incidence of the disease in our population brought about, I believe, by a kind of fundamental "speeding up" in the tempo of American communal and family life. In many cases the not so simple process of making a deliberate effort to avoid tension will do more to cure an early hypertensive than all the medicines at our command.

The few men I have known who have had guts enough to "get away from it

all" before arterial damage occurred have — seemingly, at least — successfully stopped or vastly slowed an early hypertension.

Such a thing is not a practical means of treatment for many patients. A wise patient who understands the problem he faces can often rearrange his life to some degree so that at least some sources

of tension are avoided. Instruction in this is definitely a part of the physician's job in the treatment of the disease.

Psychotherapy will benefit a certain number of these people but, at present, is not within the range of real possibility. Expense, time, and the shortage of trained personnel all operate to make it difficult to do.

Summary

All in all, the early case of hypertension can best be handled by the application of three routines.

1. Patient re-education.
2. Judicious application of the mild sedatives or the tranquillizers.

3. Careful avoidance of iatrogenic potentiation.

The last is sometimes just as important as the first two and is, by all means, the most frequently violated.

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Infantile Obesity



The Diagnosis of Growth Failure

This summarization attempts to cover the essential information on the subject and is designed as a time-saving refresher for the busy practitioner.

One of the most perplexing problems a busy physician ever has to cope with is patiently trying to determine the reason why Billy doesn't grow. The possibilities are legion,^{8, 11, 12, 13} the probabilities somewhat less so, and, as in most diagnostic problems, a long detailed history and physical examination along with some able assistance from the x-ray department and laboratories are needed before the patient or his parents can be adequately treated.

But to begin with, do we really have a diagnostic problem on our hands? Is Bill growing? The first thing to do is to determine where he stands regarding height, weight, sexual and mental maturity in relation to other children and even more important, to himself at previous ages. Mnemonics have been devised for various measurements at various ages,¹⁴ along with "underweight" tables, but these are only useful in comparing the patient to "averages." Infinitely more useful and valid are the grids and percentile tables⁵ with which we can compare the patient or any of his individual measurements to himself as well as to the averages and ranges expected in his age and sex group.

And what do we do if we have no

past records to compare him with, or if we determine that his rate of growth has suddenly dropped off? Then we must be prepared to take the necessary diagnostic steps and treat, if possible, the offending mechanism.

What are the reasons for growth failure? Or stunted growth? We have attempted here to classify the reasons and will list them with regard to the mechanism involved, some hints at diagnosis, and when available, the corrective therapy.

I. Genetic

A. Nomal Small Statured Persons
may usually be diagnosed by comparing them with the levels of growth or development attained by other members of the family. The heredity of the family as well as the race of both parents should be ascertained in the history. Usually no other abnormalities are found but they should be sought. Comparing the child with previous measurements, if available, shows that he has, for the most part, been in the same percentile and will probably remain in it until adulthood. Occasional spurts or lapses in one measurement may be encountered.¹ Therapy is neither useful nor advisable, but

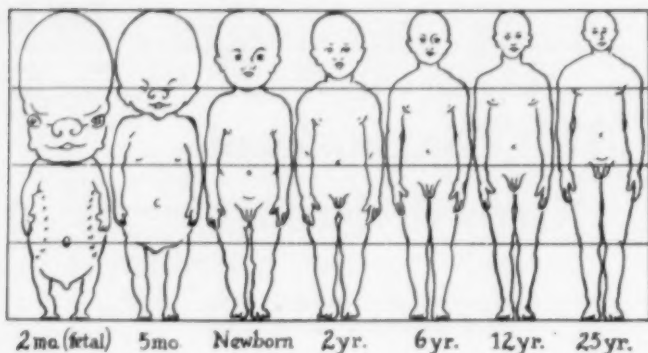


Fig. 1.
Body Proportion
Changes. (after
Robbins)

the family may need a patient explanation before they accept him for just what he is.

B. Ateliotic Dwarfs may have a hereditary history or may occur in families with no prior history of dwarfism. There are the circus midgets usually, who have a characteristic doll face, high pitched voice, and perfectly proportioned head, trunk, and extremities. In these, too, no therapy is useful.

C. Sex plays a part in bringing children to the office, in that girls weighing the same as boys at birth begin as early as six to twelve months to show evidence of earlier maturation and more rapid initial growth. The boy may be small by comparison. But a careful explanation to the parents is usually sufficient.

II. Nutritional Disturbance

A. Inadequate Intake

1. *Starvation* diets offered to the children because of poverty of money or foodstuffs (famine) or because of a faddism in the family or occasionally because of a not too wisely determined hypoallergic diet may lead to curtailment of growth in a child. The mechanism is thought to be through a depression of the anterior pituitary. Adequate

replacement diets are the treatment of choice. Cortisone and B₁₂ have also been tried with varying degrees of success.^{5,7} If the starvation has continued too long, however, the pituitary depression may prove to be irreversible.

2. *Anorexia Nervosa* may likewise be a cause of growth failure. It is often difficult, if not impossible, to differentiate from primary panhypopituitarism. Psychiatric examination and high caloric feedings may be used as diagnostic as well as therapeutic tools, but as in other forms of starvation, the changes may be permanent by the time the diagnosis is made. Psychiatric assistance may be necessary in the parents as well as the child.

3. *Maternal Malnutrition* is a very important factor in infancy,^{3,8} not only in leading to a higher rate of premature deliveries but in determining the size of the full term infants. Again, the proper therapy is a high caloric balanced diet. The type of milk used appears to be of no particular consequence.⁹

4. *Prematurity* influences the size of the infant until many months after birth. The history of prematurity, however, should not deter the examiner from seeking other causes for stunting. The treat-

ment, of course, is prevention, but good premature cares does much to erase the stigmata of prematurity.

5. *Physiologic Growth Cessation* in the post-infantile and pre-adolescent periods in which the appetite is also diminished require understanding but no therapy. This "cause" of growth failure is only included because of the commonness of its being presented to the physician as a complaint.¹⁰

B. Inadequate Utilization operates through the pituitary mechanism in the same way that inadequate intake behaves.

1. *Emotional Malnutrition* is thought to be one of the reasons for lagging growth in institutionalized children. The lagging in these children is unexplainable in terms of caloric intake. The treatment is individual home care but cannot be carried out often enough.

2. *Anemia* with or without *chronic shock* (hypovolemia) reduces the ability

of the tissues to receive or use the ingested food. The anterior pituitary is particularly vulnerable to malnutrition as has been stated before. Diagnosis is by means of a hemogram and blood volume studies. Treatment should be directed at the underlying cause.

3. Rapid or ineffectual passage of food through the gut because of *achylia*, *gastrica*, *diarrhea*, *hepatic cirrhosis*, *steatorrhea* (*muco-viscidosis* and *celiac syndrome*) and *tapeworms* or other intestinal parasites are at times implicated in growth failure. The abnormal appearance of the stools, the ova and parasite examinations, cultures, serum proteins, and gastric analysis are among the tests that should be relied upon if one of these conditions is suspected. Again, the treatment is aimed at the cause.

III. Skeletal Defects

A. Congenital Skeletal Defects are occasionally encountered in the office for

Fig. 2. The mean for the distribution of weights is 77.2 lbs. Slight skew to right suggests inclusion of a few obese subjects. (after Nelson)

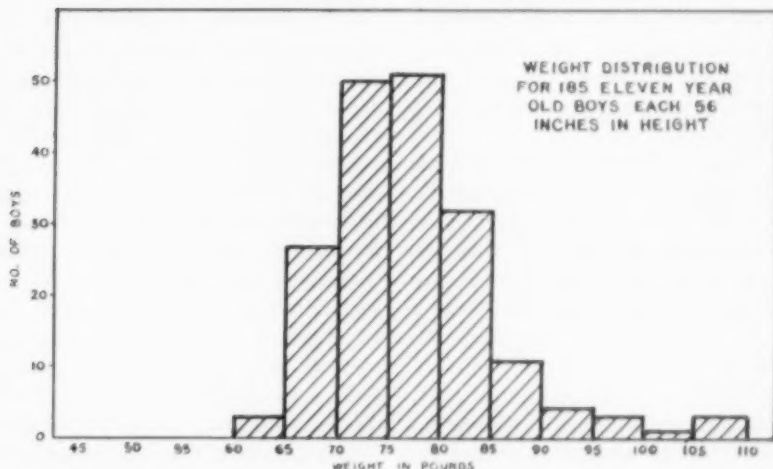




Fig. 3. Spadelike hand and broad foot of mongolism in a 12 year old boy. Roentgenogram shows maldevelopment of second phalanx of fifth finger.

diagnosis. *Achondroplasia*, *micromelia* and *osteogenesis imperfecta* are usually obvious from history and inspection, but *chondrodystrophies* and *pseudohypoparathyroidism* (poor end organ response) may only be diagnosed after x-ray, urinalysis, and serum calcium. *Turner's syndrome* (dwarfism with ovarian agenesis) may even be more subtle but if a web neck is present, it should serve as a very strong clue. *Mongolism* and other *cerebral defects* are at times associated with dwarfism but the mechanism is not known. Hypothalamic—pituitary axis depression, has been conjectured as the cause. No therapy is effective.

B. Acquired Skeletal Defects such as *tuberculosis*, *juvenile osteochondritis*, *rickets*, and *scurvy* may also lead to skeletal dwarfing. X-rays, Mantoux, cultures, ascorbic acid uptake and other tests should be performed as indicated.

IV. Endocrine

A. Hypothalamic Dwarfing may be due to an *organic lesion* leading to *Froehlich's syndrome*, a *congenital de-*

fect of the hypothalamus, which would include *Laurence-Moon-Biedl syndrome*, or *true precocious puberty* with premature closure of the epiphyses. The *Froehlich's syndrome* may be diagnosed as are other *intercranial organic lesions* by means of x-ray revealing erosion and downward pressure on the *sella turcica*. Not all fat children are *Froehlich's* nor are all *Froehlich's* fat.² No treatment has been proven useful in these syndromes.

B. Hypopituitary Dwarfism should be divided into anterior and posterior pituitary dwarfing. A reduction in the *anterior pituitary hormones* may be caused by tumors such as *craniopharyngiomas* or *chromophobe adenomas*, by malnutrition, by *xanthomatosis* or may have no apparent etiology. Anterior pituitary dwarfs have *hypothyroidism*, *hypoadrenalism*, and *hypogonadism* as well as a deficiency of the growth hormone *per se*. Therapy is replacement and should be in the hands of a qualified endocrinologist. The *posterior pituitary deficiency* presents itself in infancy and childhood as *diabetes in-*

sipidus. It may be the result of encephalitis, trauma, tumor, or it may be idiopathic. The diagnosis may be comparatively easy with extreme polyuria and polydipsia but the diagnosis of the etiology may be much more difficult. X-rays, urine concentration tests, and visual field are part of the necessary workshop. If the etiology cannot be ascertained or treated, pitressin may be used to allay the symptoms.

C. Hypothyroidism is one of the most frequently blamed causes of growth failure. Unfortunately, it is innocent many of the times when treated and guilty while remaining undiagnosed. Not all hypothyroid patients present as the dull witted, coarse skinned, thick tongued cretin. Relative hypothyroidism may often remain obscure. Lethargy, constipation, and sensitivity to cold should be enough hints to get skeletal surveys, protein bound iodine, and possibly radio active iodine uptake. The above mentioned points in addition to the difference in skin texture and sella turcica changes should serve to differentiate hypothyroidism from pan-hypopituitarism if the diagnosis is still in doubt. A therapeutic trial of thyroid hormone may be used. This will be completely effective in hypothyroidism (with the exception of mental retardation) but will fail to restore growth rate, sexual development and adrenal activity in the pituitary dwarf.

D. Hyperparathyroidism which mobilizes massive amounts of the inorganic bone salts may result in vertebral compression and other fractures leading to stunted growth. Anorexia and emaciation are also seen in this disease and can be implicated in the growth failure. Primary hyperparathyroidism is treated by removal of the

offending tumor; that secondary to renal disease or rickets can be helped by eliminating the cause. Bone cysts and rarefaction, renal calculi, and high serum calcium are convincing evidence of the disease.

E. Hyperadrenocorticism causes stunting of the growth by premature closure of the epiphyseal centers. Either an adrenogenital syndrome of Cushing's syndrome of carbohydrate regulating hormone overproduction may be involved. Since tumor is usually the cause, diagnosis may be arrived at by means of the clinical picture, pyelography, retroperitoneal air studies and analysis of the urine for hormone breakdown products. Treatment is aimed at removal.

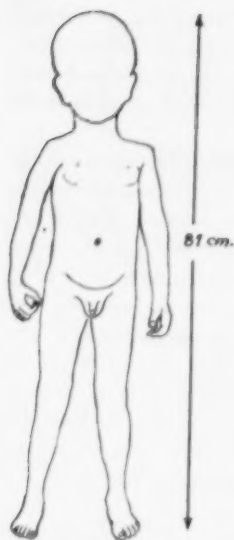
F. Hypergonadism is also responsible by means of premature closure of the epiphysis. The causes are usually Leydig cell tumors in males and granulosa cell tumors in females which must be treated surgically. Iatrogenic hypergonadism has been seen too many times to consider the use of sex hormones innocuous in inexperienced hands.^{12, 13}

V. Inborn Errors of Metabolism

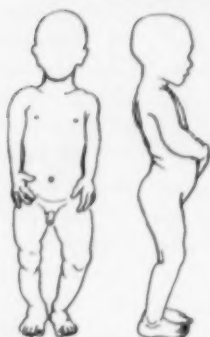
A. Diabetes Mellitus may lead to failure to grow or actual weight loss although some observers have reported both skeletal and sexual overgrowth in pre-diabetics or early diabetics. The diagnosis by polydipsia, polyuria, polyphagia, abnormal glucose tolerance curves and abnormal contents of urine and the treatment by diet, exercise and insulin are known to most practitioners.

B. Glycogen Storage Diseases (hepatic, cardiac and muscular) may be diagnosed by the appropriate cardiograms, x-ray, liver, or muscle biopsies. No treatment has been found.

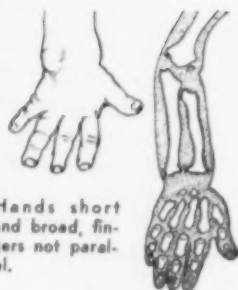
Growth Disorders



Primordial Dwarf
4 yrs. old



Achondroplastic Dwarf showing a combination of short extremities with normal head and trunk.



Hands short and broad, fingers not parallel.

X-ray showing thickness of bones with irregular epiphyseal ends.

Congenital Hypothyroidism Boy—4 mo.

Typical Cretin



11 years

Precocious Puberty—same boy



2 1/2 years



Hypopituitary Dwarfism
Boy 13.5 yrs.

121 cm.



100 cm.

Gonadal Dysgenesis

C. **Lipoid Histiocytosis** may also be diagnosed by the appropriate x-rays and bone marrow aspirations, but no therapy is effective.

D. Equally discouraging are the diagnoses of *cystinuria* (Fanconi's syndrome), *Tay-Sachs disease*, or *progeria*. *Galactosemia*, however, is treated by elimination of lactose from the diet. It is diagnosed by finding non-fermenting sugar in the urine.

VI. Congenital Anomalies

A. **Renal anomalies** which may lead to renal failure may act directly or by means of secondary infections or by renal rickets and secondary hypoparathyroidism in leading to growth failure. If an obstruction or other surgically repairable anomaly is present, then the patient may be helped. Otherwise, the prognosis is poor.

B. **Central Nervous System anomalies** such as Mongolism, cerebral hypofunction associated with Turner's syndrome, agenesis, and Tay-Sachs disease have already been mentioned, but in addition, sub-dural hematomas have been cited as causes of growth failure. The diagnosis is by finding the loculated fluid (puncture, x-ray) and the treatment is by surgical removal.

C. **Cardiac anomalies** may work the same way that anemia produces growth failure. Any deficiency of oxygen or nutrients to the tissues may result in decreased growth.

D. **Gastro-intestinal anomalies** such as stenosis, fistulae, malrotations, or megacolon may result in decreased utilization of food with secondary stunting. These

must be treated surgically.

E. **Lung cysts and pulmonary agenesis** also tend to decrease the oxygen supplied to the periphery with resultant growth failure.

F. **Hepatic anomalies** such as cirrhosis from inspissated bile or hepatitis, duct atresia, or glycogen storage disease have been cited as causes of decreased growth.

VII. Increase of Catabolism

Any increase of catabolism over a prolonged period of time may lead to growth failure through an exhaustion of body resources. *Chronic infection* such as tuberculosis, lues, or chronic osteomyelitis; *parasites* such as malaria and intestinal parasites; and *multiple trauma* have been implicated too often to be forgotten. *Allergic diseases* may also act as double jeopardy in that the hypo-allergic diet may be insufficient in calories or specific contents and lead to malnutrition. Therapy with B₁₂ and corticoids^{4, 6} has been attempted in addition to adequate diet. *Malignancy*, often the first thing thought of by the parents, must be sought and excluded before the differential diagnosis is completed, but unfortunately by the time the malignancy has caused weight loss and wasting, it is usually inoperable.

In conclusion, although there are many reasons for growth failure, the physician should not be frightened or overwhelmed. A careful history and physical examination along with the proper x-rays and judicious laboratory tests usually reveal the nature of the beast.

Summary

1. Growth failure is a fairly common complaint in the doctor's office.

2. A reasonably complete list

of the causes, real and imaginary, of growth failure has been discussed along with brief hints at diagnosis and therapy.

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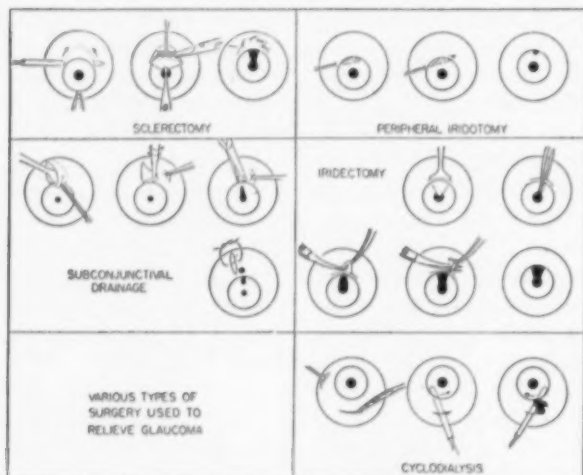
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Clini-Clipping



The Treatment of Leukemia

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When I was in medical school 20 years ago, the treatment of leukemia was a subject that could be covered in a few short paragraphs of a text, or a few minutes at the end of a lecture. In the last ten years the picture has changed completely. One is now confronted with a choice of therapeutic measures and the selection of the best treatment for a given type of case is of the utmost importance. Measures that are effective in chronic leukemia are often useless or contraindicated in acute forms, and vice versa. The practicing physician must know which types of treatment he should undertake himself, and which ones should remain the province of the specialist. As has happened in the past with such other chemotherapeutic agents as arsphenamine, sulfonamides, and insulin, what starts as a specialized skill eventually becomes part of general practice, and the same will probably apply eventually to the chemo-therapy of malignant disease. Several agents that were limited to investigational use a few years ago are now available on the general market. These include cortisone, nitrogen mus-

tard, folic acid antagonists, Myleran and 6-mercaptopurine. In this article their use and limitations will be considered.

The therapeutic agents at our disposal may be classified according to their mode of action into four groups; irradiation (X-Ray and P^{32}); cytolytic drugs (urethane, Myleran, and nitrogen mustard); anti-metabolites (6-mercaptopurine and folic acid antagonists); and steroid hormones.

X-Ray is still the cornerstone of therapy for the chronic leukemias. Periodic irradiation of the spleen will maintain patients with myelogenous leukemia in remission for several years. There is some disagreement as to whether it is better to await signs of relapse before the next treatment, or to irradiate at regular intervals, but there is no dispute as to the usefulness of X-Ray in controlling the disease. In chronic lymphatic leukemia and lymphomas, X-Ray to groups of nodes has a similar beneficial effect, and may be followed

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by long remissions, or even failure of the tumor ever to recur in the irradiated site.

Radiophosphorus is another way of introducing radiation into the body by the oral or intravenous route. The results in the treatment of chronic leukemia with P^{32} are roughly comparable to the results obtained with X-Ray; the fact that it is only available at large centers makes it of academic interest to many practitioners. In the lymphomas P^{32} is not as satisfactory as X-Ray.

Cytolytic Drugs Arsenic, in the form of Fowler's solution has been known to be beneficial in the treatment of chronic leukemia for many years. With the increased availability and superior results of X-Ray it has fallen into disuse but can still be employed in selected cases to advantage. At the present time there are several newer drugs available whose actions are superior. Like arsenic they cause disruption of mitosis, karyorexis, and necrobiosis of cell nuclei. Because, as with X-Ray, dividing cells appear to be most susceptible to their action, they are sometimes called radiomimetic. They probably poison enzyme systems vital to nucleoprotein synthesis during mitosis, but the nature of this reaction is obscure. The nitrogen mustards, triethylemelamine (TEM) and Myleran are known to possess highly reactive alkyl groups and are therefore often referred to as polyfunctional alkylating agents. All of these drugs are marrow depressant and must therefore be employed with caution, lest agranulocytosis, thrombocytopenia and aplastic anemia result from their use. Recommended dosages should not be exceeded as a rule and patients being treated

with them should be under close supervision, with frequent examination of the blood during the period of therapy.

The safest of this group, and therefore the drug most likely to be employed in general practice, is urethane (ethyl carbamate). It is available in 0.3 gm. enteric coated tablets, but is best given in the form of a 25% solution in some sweet flavored vehicle such as aromatic elixir, or syrup of orange, to disguise its bad taste. Such a preparation contains 4 gm. (the usual initial dose) in a tablespoon and 1 gm. (the usual maintenance dose) in a teaspoon. The usual procedure is to start the patient on 4 gm. of urethane daily, given as a single dose at bedtime. The effect may take from 2 to 4 weeks to become noticeable. If no effect is apparent after that time the dose may be increased to 6 or 8 gm. or more if tolerated, or some more powerful agent may be employed. After the blood count has been reduced to levels below 15,000 it is advisable to cut the dose to a maintenance level of 1 gm. daily. From $\frac{1}{2}$ to $\frac{2}{3}$ of patients with chronic myelogenous leukemia can be maintained in this way for periods of a few months to a year, or longer. Eventually, however, they will require increasingly larger maintenance doses and become refractory to the drug. With chronic lymphatic leukemia less than $\frac{1}{3}$ of patients will respond and in general require larger doses to produce an effect. The chief complication of urethane therapy is nausea and vomiting. This may be controlled by lowering the initial dose and increasing it as tolerated, but in stubborn cases it is better to change to another of the several agents at one's disposal.

Urethane is best suited for the early or slowly progressing case of leukemia,

or for prolonging remissions obtained with X-Ray. It is the only chemotherapeutic agent of proven value in multiple myeloma; in this disease it may produce results ranging from relief of pain to objective remission in about half of the cases.

Myleran (1,4, dimethane sulfonyloxybutane) is an alkylating agent that has proved highly useful in the treatment of chronic myelogenous leukemia. It is given by mouth and has no disagreeable side effects in the usual oral dosage of 4-10 mgm. daily. This is continued until the leukocyte count has reached the desired level. Like all the alkylating agents, Myleran is a marrow depressant. The whole blood picture should be closely followed during its administration and the drug withheld if the platelet count falls below normal. When remission is obtained a daily maintenance dose of 0.5-1.0 mgm. should be given.

Nitrogen mustard (methyl-bis(β -chloroethyl)amine) (HN2), *tri-ethylene melamine* (TEM), *tri-ethylene phosphoramide* (TEPA) and *tri-ethylene thiophosphoramide* (thio-TEPA) are polyfunctional alkylating agents that have definite usefulness in certain types of cases. HN2, TEPA and thio-TEPA are given parenterally, and TEM is administered by mouth. They are all powerful marrow depressants and should be used with caution, particularly in patients with a previous history of radiotherapy.

HN2, the first of this group to be used was originally developed as a vesicant war gas. It was found to have tumoricidal activity when given intravenously and has been extensively employed since World War II as an anti-leukemic agent. Its chief usefulness

has been with solid tumors, lymphomas and Hodgkin's Disease and many undifferentiated lung carcinomas. It may often be used to advantage in conjunction with X-Ray. For example, a case of Hodgkin's Disease with systemic symptoms but no localized tumor masses would best be treated with HN2, a patient with enlarged nodes without systemic symptoms would be more suited for X-Ray therapy; a patient with both systemic symptoms and tumor masses might well be treated with both agents.

The usual dose of HN2 is 0.4mg/kilo of body weight. The drug comes as a powder and is dissolved in distilled water in a concentration of 1mg/ml. Hydrolysis takes place immediately, in two stages, the first stage of hydrolysis being much more reactive in the body than the second. Therefore nitrogen mustard should be injected rapidly as soon as it has been dissolved. Care must be taken to inject directly into a vein, since tissue infiltration will result in painful inflammation, thrombosis and even slough. It is a wise precaution to locate the vein first with a syringe of saline or a rapidly running infusion and transfer the syringe with the freshly prepared HN2 to the needle in situ. The dose may be given in one injection or divided into 2 or 4 doses on consecutive days. It often causes nausea and vomiting for several hours after its use, controllable with such drugs as Thorazine, Bonamine, or phenobarbital. Depression of platelets and lymphocytes is maximal in the first week after its use, polymorphonuclear leukopenia occurs in the second week and anemia is most noticeable in the third or fourth week. While these marrow depressant effects are usually not severe enough to cause trouble, in pa-

tients who have had previous X-ray or chemotherapy they may be severe and even fatal. It is a wise precaution in the latter group to give the drug in divided doses, awaiting the report on platelet and leukocyte levels each day before proceeding with therapy and withholding the next dose in the face of a sudden drop. Except in the most urgent cases the recommended dose should not be exceeded, and a course of mustard should not be repeated within two months, or longer if the peripheral blood levels or marrow still show signs of depression.

TEPA and thio-TEPA are just as toxic to the marrow as HN2 but have the advantage of being non-irritating locally so they can be injected intramuscularly and into serous cavities. They do not cause nausea or vomiting, and it appears likely that these advantages will make their use preferable to nitrogen mustard in the future.

TEM is an oral preparation with a similar effect on the marrow and some tendency to cause nausea. It should be given on a fasting stomach together with a teaspoon of bicarbonate of soda dissolved in a glass of water. The usual dose is 5mg daily for several days with further doses determined by the levels of the peripheral blood elements. TEM is a potentially dangerous drug, and I have seen a single dose bring the blood count from 300,000 to 80,000 in a week in a patient with chronic lymphatic leukemia. For the ambulant patient with a lymphoma or chronic lymphatic leukemia its ease of administration may make it a very useful drug, given with due caution.

Most recently Chlorambucil (CB1348) has been introduced as an oral alkylating agent. It is less toxic

than TEM and seems to be preferred to this drug by those who have used it. It is still in the investigational category.

Another cytolytic drug recently in wide use in Europe is Demecolcin (deacetyl methyl colchicine). This drug is a mitotic poison like its parent substance, colchicine, but less toxic. From 3-7 mg. daily will bring about remission in myelocytic leukemia followed by a maintenance dose of 1-4 mg when the white count has fallen to 20,000. Demecolcin appears to be of no value in lymphatic leukemias.

Antimetabolites In contrast to the preceding group of chemicals which treat leukemias by destroying blood cells, the antimetabolites act by preventing the synthesis of nucleoproteins essential for cell division. During mitosis the deoxyribose nucleic acid (DNA) of which the chromosomes are composed, has to double in order for each daughter cell to inherit the normal number of chromosomes. DNA is synthesized within the cell from the purines (adenine and guanine), pyrimidines (thymine, cytosine, and uracil), ribose, amino acids and phosphoric acid. The pathways of DNA synthesis are as yet poorly understood, but it is possible to block some of these pathways by offering, in place of the natural ingredients, a similar compound that has been chemically altered. Such a synthetic analog is called an antimetabolite. When it is used in place of the natural component of DNA, a succeeding step in the synthesis that depends on the specific chemical property that has been changed in the metabolite cannot occur. There are many such chemicals that act in lower forms of life or animals, but in man the only ones that have proven clinically useful are the folic acid an-

tagonists and the adenine antagonist, 6-mercaptopurine (6MP). The two folic acid antagonists most widely used are amethopterin (Methotrexate) and aminopterin. Folic acid is converted in the body into folinic acid, essential for the synthesis of thymine. The folic acid antagonists block this conversion, thus preventing thymine, and therefore DNA synthesis. 6MP blocks the incorporation of adenine into DNA.

The therapeutic agents discussed up to now are limited in their use to the chronic leukemias and lymphomas. In acute leukemias they are either ineffective, or, in the case of X-ray sometimes appear to accelerate the downhill course of the patient. The antimetabolites, on the other hand, are effective in acute leukemias and usually ineffective in the chronic forms, although some cases of myelocytic leukemia will show a response to 6MP. Although, it is not true that anti-folics are ineffective in adults, they give much better results in children. 6MP is effective in both adults and children.

Because it is less toxic than the anti-folics, 6MP is probably the drug to try first in a case of acute leukemia. The usual dose is 2.5mg/kg daily, but some people prefer doses up to 6mg/kg. (There is some evidence to indicate that more and better remissions may be obtained in children if the 6MP is accompanied by 2.5mg/kg daily of an amino-acid antagonist, Azaserine. The latter drug alone, is not effective against leukemia in man.) The commonest toxic effect of 6MP is nausea and vomiting, which may be modified with Thorazine. It usually takes from 3 to 6 weeks to obtain a remission with 6MP. When the peripheral blood shows signs of improvement therapy should be regulated

by the appearance of the marrow, examined as often as necessary. The drug should be continued until the marrow appears normal (e.g. less than 4% blasts). In the opinion of some, including this author, it is preferable to accept the risk of marrow hypoplasia, which can be temporized by the use of transfusions and antibiotics, than to stop therapy with more than a normal number of blasts still in the marrow. When satisfactory hematologic remission is attained, 6MP should be continued at a maintenance level, which may, in some cases, turn out to be almost as high as the initial dose. However, the drug can usually be well tolerated for long periods of time. The usual duration of remission is 4-6 weeks without maintenance therapy, and with it somewhat longer. Failure to obtain remission after a month, rapid relapse after remission, or failure to respond a second time is an indication to turn to some other form of therapy.

The alternate choice of drugs for treatment of acute leukemia is amethopterin (Methotrexate) which is given daily in a dose of 2.5-5mg. This should be continued for from 2 to 8 weeks to attain a remission, or until toxic symptoms intervene. These consist, at first, of sore tongue, sore throat and ulcerations of the oral mucosa, but, if the drug is continued may be followed by prostration, vomiting, diarrhea, alopecia, hemorrhage and cutaneous eruption. The antidote for severe manifestations of anti-folic toxicity is citrovorum factor (Leucovorin) but this also makes the leukemia worse and it is therefore preferable to stop the anti-metabolite before severe toxicity develops, and resume its use in lower dosage after the toxic symptoms have cleared. Because

of its toxicity, maintenance doses of amethopterin are usually not employed. Aminopterin, the other antifolic in wide use is 10 times as potent on a weight basis (Dose: 0.25-0.5 mg daily) and perhaps more toxic. With either drug remissions are indicated by subjective improvement, increase of platelets and erythrocytes, and decrease of leukemic cells in the blood, and reversion of the marrow to normal. Relapse usually occurs in 6-8 weeks but in some instances remissions may persist for a year or more. When relapse occurs additional responses to the antifolics may occur. A patient who has become refractory to any form of therapy may occasionally show a renewed responsiveness following remission induced by some other agent.

Hormones The steroid hormones, cortisone and prednisone and corticotropin (ACTH) are powerful marrow stimulants. In addition to their myelotrophic effect they also influence, in a manner unknown, the maturation of the blood cells. Since acute leukemia is a disorder of the marrow in which the ratio of dividing to maturing blood cells is increased, by restoring this balance in favor of maturation cortisone can bring about remissions in acute leukemia. This effect seems, in general, to be most marked with lymphoblastic cells. In myeloblastic and monoblastic leukemias the drugs are usually ineffective, and at times seem to make the disease worse, although the patients may appear clinically improved. With the usual doses of 300 mg of hydrocortisone or 30 mg of prednisone there is rapid subjective improvement, fall in the temperature, cessation of bleeding and relief of pain, followed in cases in which remission is obtained by return of the

blood picture and marrow to normal. The usual complications of steroid therapy are to be watched for and the dose of these drugs should be reduced as soon as remission is obtained, and tapered off with accompanying injections of ACTH (40 units ACTH gel) with the ultimate aim of maintaining the patient on weekly or bi-monthly injections of ACTH if possible.

Steroid induced remissions, like those obtained with antimetabolites may last from a few weeks to over a year; second and third remissions may be obtained but are usually of shorter duration. The steroids are the drugs of choice for patients who appear too sick to survive the length of time necessary for the antimetabolites to become effective.

Recent reports have indicated that heroic doses of steroids in the range of 0.5 to 1gm/day of prednisone will produce remissions in patients with acute leukemia where all other agents have failed. Remissions at this dose level occur with lymphoblastic, myeloblastic or monoblastic leukemias. The toxic effects of this type of therapy are what one might expect, and the hazards and expense limit its usefulness to cases of fulminating severity, or patients who have become refractory to everything else and in whom one last attempt to obtain a remission is to be made.

In chronic lymphoblastic leukemia and lymphomas cortisone frequently is useful in shrinking tumor masses and in controlling troublesome cutaneous manifestations of the mycosis fungoides type. A patient with a hypoplastic marrow and lowered peripheral blood elements may sometimes be treated with steroids until his blood has sufficiently recovered to permit treatment with some cytolytic

agent such as TEM. Patients with Hodgkin's disease who are prostrated with fever can be made afebrile and ambulatory with steroids for varying periods of time. When the drug is stopped, however, the symptoms promptly recur, indicating that the cortisone only holds the disease in check. It is also possible to use cortisone to push a chronic lymphatic leukemia in a terminal acute phase back into a more chronic form of the disease for further treatment with other forms of therapy.

Summary and Conclusions

To summarize, in the approach to the patient, the choice of therapy will be modified by the nature of his illness:

Chronic myelogenous leukemia that is advanced, or in which the patient is severely ill should be treated by X-ray;

Chronic myelogenous leukemia, if early and slowly progressing can be treated with Myleran or Urethane;

Chronic lymphatic leukemia, especially in the elderly, should be left alone as long as the patient appears to be doing well without treatment;

When signs of marrow depression or significant organ enlargement appear, X-ray therapy or TEM are indicated;

Lymphomas with systemic symptoms without tumor masses should be treated with nitrogen mustards or TEM;

Lymphomas with enlarged nodes or tumor masses should be treated with X-ray;

Acute leukemia should be treated with 6-mercaptopurine (adults and children) or Amethopterin (children);

Very sick acute leukemias, and certain selected chronic leukemias and lymphomas may be profitably treated with steroid hormones.

It is apparent that if one therapeutic measure fails one has several others to fall back on, and particularly with the acute leukemias, it is often possible to obtain a remission with one agent, to which the patient subsequently becomes refractory, and obtain further remission with a different agent. When the patient subsequently becomes refractory to the second drug, it may be discovered that sensitivity to the first one has been restored. By alternating the different drugs it is now possible in selected instances to prolong the life of the patient for several years. Although leukemia is still a fatal disease, rapid strides are being made toward its control. Many of us are going to live to see that day, and our efforts with patients of this type should be directed to prolonging their lives as much as possible, so that if something better for its treatment is discovered, they too, may benefit from its use.

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Some Aspects of Obstetrics In Rural Practice

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Probably no writing on obstetrics can be entirely new. This field is important always, and continued review and improvement is in order at all times. The great majority of approximately one-thousand maternity cases upon which this discussion is based were delivered in a small combination office-clinic, some at home, and a few in a general hospital. I realize one cannot be dogmatic in the definition of various terms such as *conservative*, *prolonged labor*, etc. Some of my experiences and impressions, quite naturally, will vary with the ideas and opinion of others.

Obstetric judgment is a vitally important thing, and it is gained partly through experience. But a goodly amount has to be based on innate common sense. There are no hard and fast rules which may be followed. We should give the benefit of our own experiences to others to contemplate. We can always learn, and each individual has to learn, in his own way, the things we accept often as common knowledge. Nearly always the new group coming along learns to improve on commonly accepted practices. This is as it should be.

The discussion to follow is not designed to introduce new concepts or to revolutionize the science and art of obstetrics, but contains simply my own impressions and experiences.

The cases have not been broken down into exact figures for statistical purposes. For the number, the statistics would be about what one would expect from a similar group of cases, except perhaps, there were fewer cases which required section than one would expect. More breech babies were lost in my earlier years than should have been. Practically all breech losses were in the first five years during which time there were an appreciable number of deliveries.

No maternal deaths occurred, because the cases, in which there was definite danger, were recognized and were delivered in a general hospital and referred often to a specialist. This series included about fifteen cases with toxemia and pre-eclampsia, about eight or ten cesarean sections, two or three of which were repeats. Only one cesarean section had to be done because of a small pelvis, one because of a face presentation, and two

cases for total placenta praevia. The others were necessary because the labor became prolonged with no progress, in spite of an apparently adequate pelvis.

I have no special routine technic. Each patient is watched closely. There is a nurse, a practical nurse, or a responsible member of the family with the patient all the time after she enters the clinic. During office hours, I am only a few feet away from the patient at any time.

After the baby is born, the infant is kept in the room with the mother, and in bed with her as much as she desires. This procedure is good for both babe and mother.

Most cases are normal, and not all of the factors discussed will apply to most patients.

Report between doctor and patient is important and should be stressed. It is very helpful to remember a patient's name and have interest in her and show it continually. A pregnant woman needs sympathetic understanding all the way through her pregnancy, and it is a great help for her to feel that the physician is really her friend.

With the young girls, I spend a lot of time just talking about everything which might be of interest to them. The process of pregnancy and labor is explained, stressing the fact that, after all, it has happened several billion times before and is a natural process. However, I always acknowledge the fact that I realize this is her first pregnancy, and that I rejoice with her and am indeed deeply interested in her future health and happiness. With older women, I inquire about the other children and show interest in the things which I know concern them.

Over the years, prenatal care has con-

sisted primarily of close supervision, even with daily checks as to weight, blood pressure, and urine findings. Ophthalmoscopic examinations are very useful. Adequate iron and folic acid are given routinely.

About once or twice a year it has been necessary to send a preeclamptic case to a specialist when it was evident that she would require more expert treatment. Four or five patients were seen initially when in convulsions or on the verge of them. I always referred these patients promptly to the specialist and his hospital. X-ray examination of all primiparas is routine with me, and occasionally of multiparas when indications arise.

Until recently, the most satisfactory analgesia was, in general, a combination of Demerol, fifty to one hundred mg. with 1/200 gr. scopolamine, as an initial dose, when labor was well started. In cost cases, I now use 50 mg. Demerol plus 1/150 gr. scopolamine by "hypo" and 25 to 50 mg. Thorazine orally. If labor is prolonged, usually 1/12 gr. morphine in addition by "hypo" is all which is required. The Demerol without scopolamine was repeated freely every two hours, but the scopolamine was not repeated usually at less than six hour intervals. In the second stage, nitrous oxide, with oxygen, was given to nearly all my patients.

The variation from this included morphine 1/6 to 1/4 gr. and atropine 1/100 gr. or morphine 1/6 to 1/4 gr. with 1/200 gr. scopolamine, when it was felt that several hours would elapse before complete dilatation of the cervix, or when the labor had been long and harder than usual. Many times this medication relaxed the patient so well that complete dilation and delivery was accomplished

within an hour, and certainly before it was desirable. Although some sluggish babies may have been the result, no real harm was done. Surprisingly enough, many of the babies were not affected at all, and were very alert. This applied also to some prematures. Before the advent of Thorazine, a few of the babies were sluggish breathers, due to the opiate, when delivery occurred too quickly. Since I have been using Thorazine, the dose of opiate (Demerol or morphine) has been reduced so greatly that no respiratory embarrassment in the infant was experienced.

Other anesthetic and analgesic agents will be mentioned briefly, not with the view of setting myself up as an authority, but simply to report my results and impressions. Intravenous Nembutal worked well in a very few patients. When it worked it was wonderful, but in the vast majority of cases, the uncontrollable wildness which resulted in the patient more than offset its advantages. Only one baby suffered any respiratory depression, and this was of a minor nature. Pentobarbital $2\frac{1}{2}$ -5 gr. was given occasionally intramuscularly with good results.

Trilene has, so far, been a great disappointment. Most of my patients did not care for it and would discard the apparatus. Three or four patients spoke well of it. Chloroform was used only a few times but with good results. Occasionally drop ether was used for a forceps procedure. No paraldehyde was used at all. Novocaine was injected locally for episiotomies.

The majority of cases, in which post partum bleeding was experienced, were due to retained placental fragments. If the bleeding from this condition was significant, curettement was required.

Bleeding from relaxed uterine musculature occurred only five or six times, and only three cases had to be packed. My routine treatment for handling the third stage of labor is to grasp the uterus gently with my right hand, and keep the cord extended by means of gentle traction with the left hand until the placenta is expelled. Immediately after expulsion of the placenta, one c.c. of Ergotrate is given intravenously and continued, firm, but gentle force is applied to the fundus with the right hand. The flow of blood is watched closely. I observe each patient frequently, for one hour, the state of the uterine contraction and the tendency to bleed. Occasionally, I give one c.c. of posterior pituitrin intramuscularly. There is no justification for massaging a well contracted and normally flowing uterus, for it may break up nature's method for hemostasis, the firm clot.

Sedatives are given as needed following delivery, and always Ergotrate is given every four hours for from six to twelve doses, and with some analgesic preparation, such as aspirin and codeine as needed. The patient remains in the clinic from six to twenty-four hours, and then is transported to her home by ambulance. I have yet to see one patient harmed by early removal to her home.

I have only whole-hearted condemnation for this business of early ambulation in a woman who has just had a baby. To me, this is a radical and foolish procedure. I have had no case of milk leg, and no other trouble from keeping these patients in bed for several days, or as long as they wish to stay, even from four to fourteen days. Therefore, I see no reason to change my view. I will concede that if all our women were of the outdoor type, comparable to

the early American Indian, then I think early ambulation would be all right. But in this modern and sedentary age, the girls are not physically prepared for it. I do encourage movement and sitting up in bed or in a chair as soon as the patient feels like it, but I do not "push" any patient. They know when they feel like it. Most patients, to whom I have talked, who were ambulated early with a previous pregnancy, condemned the practice.

The above denunciation of early ambulation in the obstetric patient is not to be considered as applying to the field of general surgery. There it appears to be satisfactory.

I was taught to do rectals for a patient in labor, but as soon as I began my own practice, I immediately stopped doing rectal examinations and started doing vaginal examination, so I could determine what was going on. I cannot determine anything by the rectal method, and whenever a nurse examines a patient this way and relays her impressions to me, it is always wrong. There is no added hazard, in my opinion, when a vaginal examination is properly done, even when the membrane is ruptured.

In the case of prolonged labor, my usual standbys are morphine and scopolamine, alternating with Demerol and scopolamine or pentobarbital. Most of these patients were able to take sufficient nourishment by mouth to sustain their strength, but occasionally glucose was given intravenously. I desire to emphasize that, until recently, morphine and scopolamine were unexcelled, in my experience, for causing relaxation and refreshing rest. In recent months, the addition of 25 to 50 mg. of Thorazine orally greatly reduced the amount of

opiate required. Often the delivery is accomplished much earlier than anticipated, and even greater relaxation is secured. Before the advent of Thorazine, a few of the babies were sluggish breathers because of the opiate when delivery occurred too quickly. Since I have been using Thorazine, the dose of opiate (Demerol or morphine) has been so greatly reduced that no respiratory embarrassment to the infant has been experienced.

Three other cases, with protracted labor, were transferred to a general hospital and cesarean sections were done by qualified personnel. The results were excellent.

Induction of labor was indicated in about 5% of my cases. Indications were hypertension, and/or kidney damage. Cases with simple hypertension with no albuminuria were watched closely, especially when it was desirous to carry the patient further towards term. If no kidney damage supervened, labor was induced seldom, but if the pregnancy was about eight months along, and albuminuria was evident in addition to hypertension with headaches and edema, I did not hesitate to induce labor. In my series of cases, I was fortunate that all, except one, were near term for the babies to survive. This exception was really mature enough, but was still-born, following several days of severe nausea and vomiting on the part of the mother. There was no hypertension or albuminuria in this case. Induction was brought about because of marked nausea and vomiting.

For several years I have used no other method of induction than rupturing the membranes with a blunt hemostat. I do not like catheters for several reasons. They are foreign bodies. Infection could

happen more easily, and there is also the danger from hemorrhage. I have found simple rupture of the membrane has always worked. Oil, quinine, pituitrin, etc. are worthless unless the patient is at term.

Breech delivery in a primipara is a hazardous procedure. Every case in which fetal fatality resulted in the process of birth was a breech primipara. In the few cases with cephalic presentation, in which the infant was born dead, death occurred because of conditions which I considered were beyond my control. Three cases were due to what appeared to be a thrombosis of the cord, which was black throughout its length. Two or three of these cords had knots tied in them so tightly that circulation was obstructed. Two babies were born dead. I could attribute the cause to no other than post-maturity.

In some of the breech fatalities, protracted delay, before delivery of the head, was undoubtedly the cause. But in others, the delay was well within the conventional eight minutes allowed for delivery.

I have a wholesome respect for the dangers which accompany breech deliveries in primiparas. I have entertained the idea from time to time that this situation could well be a suitable indication for a cesarean section, especially in the case of an elderly primipara, who will very likely have a harder time than usual, and probably less likely to have another baby later. Nature has come to my aid several times by performing versions prior to labor. I have had very poor success in doing these versions myself.

I have experienced little difficulty with breech deliveries in multiparas. Therefore, I do not try very hard to do

versions for fear of getting into more trouble than by accepting the breech as it is. If the version appears to be easy, of course, I do it. No anesthesia is employed in an attempt to do a version.

We all accept the fact that we must give ample time for the cervix to become dilated fully in a breech delivery or any other type of delivery, and refrain from hurrying it. It takes plenty of time, but always I permit the presenting buttocks to push through, and then I attempt to seize the lower extremities. When this is completed, as rapidly as possible, I attempt to free the upper extremities, deliver the shoulders, and get the head down as low as possible, exposing the infant's mouth and nose so that he may be cleansed and aspirated as quickly as possible. Pressure is exerted over the symphysis to the uterus to encourage the exit of the head. The largest breeches which I recall were twins, one weighing eight pounds six ounces, and the other nine pounds, nine ounces. No difficulty was experienced with this unusual case.

In my entire experience of over one thousand deliveries, section has been necessary in not over eight or ten patients. Two of these had complete placenta praevias, one had a face presentation, about two or three had previous sections, one suffered from inadequate pelvic measurements, and the rest had prolonged labor with no progress, or inadequate and delayed progress in proportion to the fatigue state being built up in the mother.

In this series of cases, the rate of premature births was about what would be expected. Several of the premature babies came from the thirteen sets of twins in this series. In general, my practice was to send a premature baby to a

nearby hospital where adequate pediatric care would be given. In recent years, however, I insist that the delivery be done in the hospital so the baby can be placed more promptly under pediatric care. The survival rate in definitely premature infants has been very poor, no matter how promptly and energetically treated or by whom they were observed.

In all 5% of cases in which I have used forceps, I have used them with great respect and gentleness. All were low forceps cases except three. In one of these, the attempt was abandoned, and cesarean section was done successfully. In the other two, mid-forceps delivery was accomplished successfully.

With more mature judgment, there is no doubt that it was a mistake to have ever tried forceps in the first of these three cases. In the other two patients, I would now either give the patient more time to deliver or would resort to a cesarean section. I have been fortunate enough to have had no injuries from forceps, but I still believe it best not to employ them unless one feels that it is definitely to the advantage of the patient to employ forceps.

The physician is not justified to use forceps to speed a delivery purely for his own benefit as a time-saving procedure. One very strong reason for this is that, if a forceps baby should ever develop a neurological lesion, the family and others might believe that the use of forceps was the cause. The physician might well wonder also.

About four or five cases with manual removals of the placenta occurred in my series of one thousand cases. If the placenta did not deliver in one-half hour to one hour, it was removed manually under adequate ether anesthesia with sterile technique.

Three or four patients have had small particles retained even though the placenta appeared to have been delivered completely. These cases exhibited bleeding about two to four weeks after delivery. Curettement was necessary.

Only three cases of complete placenta praevia have been observed in this series of cases. Partial placenta praevia cases have been as infrequent. Section is the only suitable treatment for complete placenta praevia. It may not be required in patients with partial placenta praevia. The use of section depends upon the rapidity of labor and extent of the loss of blood which the mother suffers. I have had no cases of complete abruptio placenta, but I have seen a few cases in which partial separation occurred. I cannot recall any fetal fatalities due to this condition, except with two or three infants which were too premature to have survived.

Syncopal seizures have been observed in two cases. One was very transitory and did not recur. The other required the induction of labor. This case was described in the *Journal of the Medical Association of Georgia*, May, 1953, issue.

Nausea of pregnancy was quite common, and everything new and old has been tried with questionable success except that with each new modality, the success was in direct proportion to the enthusiasm with which it was used. Crude liver injections appeared to have the edge in efficacy. Intravenous pyridoxin 50-150 mg. appears to be quite helpful in many cases with the vomiting of pregnancy. Bonamine appears to be efficacious in some cases. Rarely in my experience has Thorazine been helpful in treating cases with nausea of pregnancy.

With the last 500 cases, I have used oxytocics in labor so seldom that I could almost say none at all. Very rarely is it advisable or desirable. A sedative is usually of more value. During my earlier years when I used posterior pituitrin extract often, I am sure Divine Providence protected my patients from my ignorance and inexperience, because no trouble resulted.

On the rare occasions when I use oxytocics, it is posterior pituitrin 0.1 or 0.2 cm. subcutaneously or a few drops are applied to the nasal mucosa. If the uterine muscle is fatigued, these drugs do no good. When labor is progressing slowly, it is usually because of muscular fatigue or the fact that the uterus is not quite ready in its dilating.

I have seen only two or three cases where therapeutic abortion could be justified. I believe that it must surely be justified in very rare instances, and then almost exclusively because of psychiatric indications. There has been one case in my career where, after consultation with two other physicians, it was decided that termination of an early pregnancy should be done for psychiatric reasons.

This case taught me a lot. The young mother related such a convincing story, as to how she nearly lost her mind and also nearly died because of her first pregnancy, that she knew she could not go through another one. I had two other doctors see her, and we decided that an abortion would be justified because of psychiatric grounds.

After much arguing, discussion, soul-searching and consultation, I performed a curettage. It turned out that I was a poor abortionist, because she did not lose the fetus, but she went right ahead and delivered later a normal baby with no trouble.

This experience convinced me that, under no condition, would I ever attempt to do another curettage, no matter how iron-clad the indications might appear to be.

After this experience, one other couple thought an abortion should be done for psychiatric indications, but I refused. Now they have a very beautiful child several years old. And I often wonder how they must feel when they think what they wanted to have done.

Clinic Building, Commerce Street

Clini-Clipping



Clubbed fingers in Congenital
Pulmonary Stenosis.

Rectal Pain

Tables of Rectal Pain

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Rectal pain is one of the two most common rectal complaints, the other being rectal bleeding. However, the patient possessing rectal pain will present himself sooner for treatment than the patient having rectal bleeding, and this fact frequently dooms many patients to a premature death; for bleeding is the symptom with more serious consequences. Nevertheless, rectal pain is an abnormal symptom, most common in occurrence, significant of examination, deserving of a proper diagnosis among a multiplicity of etiological factors, and culmination in relief for the patient.

The neuro-anatomy of the rectum is important if one is to understand rectal pain. The upper rectum has virtually no sensory nerves, and surgery in this area is painless without benefit of anesthesia. An example of this fact is the removal of polyps from this area with an electro-surgical unit without anesthesia or pain to the patient. The anus, anal canal, and lower rectum are liberally innervated, and this explains the intense pain suffered by patients with

lesions in these areas. This nerve supply is mainly through sacral 2, 3 and 4 by the pelvic plexuses. Since sacral 2, 3 and 4 also supplies the trigone of the bladder and the internal bladder sphincter, one can readily understand why pathology in the lower rectum and anal canal causes urinary retention in a large number of cases. Again, cutaneous branches from S2 and S3 pass to the back of the thigh and leg, and referred pain to these areas may result from ano-rectal disease. The lower part of the anal canal is supplied by the inferior hemorrhoidal nerve, a branch of the pudendal.

If a complaint of rectal pain is present, several detailed attributes concerning the pain must be answered if a proper diagnosis is to be achieved.

1. Is the pain sharp or dull in character? If sharp—does it occur as soon as the head of the column of stool

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begins to dilate the sphincter? If so, this is almost pathognomonic of a fissure in ano.

2. Does the pain persist after bowel movement is completed? If so, for how long? Persistent pain frequently signifies an inflammatory process in the anal canal.

3. Pain of a throbbing character is indicative of an inflammatory process, and if constant, then one is rather certain of the origin. This history is indicative of a possible abscess, but only the physical examination will pinpoint the location of the abscess as to being supra or infra levator, ischioanal, retroanal, or peri-anal.

4. Is the pain accompanied by rectal bleeding, and if so, by how much bleeding? Enough to just spot the tissue—then suspect a probable fissure. Enough to discolor the water in the bowl—then suspect anal or rectal disease—especially internal inflamed hemorrhoids. I do not mention carcinoma of the rectum in this instance for early rectal carcinoma causes rectal bleeding in many instances (though not enough), but does not cause pain. If early carcinoma of the rectum caused pain, the cure rate of carcinoma of the rectum would radically improve overnight.

The past history of the patient, especially the female, with rectal pain and bleeding is important. Has pelvic radiation been given to the patient in the past? If so, a factitious proctitis should be suspected. Is there a history of endometriosis? Thus, one sees that rectal pain may lead one to other systems for an adequate explanation.

5. Is the rectal pain associated with an anal discharge? This may lead to the suspicion of another group of possi-

bilities, most prominent of which is fistula in ano. However, hemorrhoids, lymphopathia venerum, proctitis, pruritis ani with lichenification of the perianal skin are all etiological candidates.

6. Is the pain associated with a protrusion of skin from the anal orifice? This may be a prolapsed rectal polyp, prolapse of rectum, prolapsed hypertrophied papillae, prolapsed hemorrhoids with strangulation, etc.

7. Is the pain associated with swelling about the anal orifice? The most common explanation is a thrombosed external hemorrhoid. However, a perirectal abscess, prolapsed anal ring, infected peri-anal cyst which might be apocrine or sebaceous, are all logical possibilities.

8. Is the pain associated with fever and leukocytosis? An abscess could be the cause, but so could a proctitis or a recto-vaginal cellulitis.

9. Is the pain associated with tenesmus? This could be due to a diarrhea super-imposed upon a case of low-grade internal hemorrhoids, but is apt to be a fecal impaction if no diarrhea is present.

10. Is the pain associated with an unusual or altered type of stool? If the stool is narrow and pencil type, one should suspect a sphincter-spasm which may be secondary to a myriad of causes, but an anal stenosis or rectal stricture may be present.

The above facts obtainable from an adequate history leads to a logical question—"How does one diagnose rectal pain?" The proper answer is brief and specific "LOOK." Do not assume that all rectal pain is due to hemorrhoids, but examine the patient. This consists of inspection to see if the peri-anal skin is normal and the sphincter competent. Next is the digital examination. This

Tables of Rectal Pain

GROUP	NAME OF DISEASE	COMMENT
Pain	Cryptitis	Sharp pain during defecation; may vary and be dull and throbbing. Sphincter spasm may occur and cause pain to be more continuous. Anoscopic examination reveals the pathology.
	Papillitis	Hypertrophied inflamed papillae cause the same subjective symptoms as cryptitis. The digital examination reveals the cause which is frequently misdiagnosed as a rectal polyp. If the papillae prolapse through the anal orifice, sphincter spasm occurs.
	Impaction	Marked tenesmus and pressure is present. Despite constant urge to defecate, the mass cannot be expelled, except in small "shavings." Digital examination is diagnostic.
	Tabes Dorsalis	The rectal crises of tabes are not common. There is a recurrent, constant urge to defecate accompanied by pain that does not result in any evacuation. Lasts for 2-3 hours, then will recur the following day. Usually recurs during morning hours. Neurological and spinal fluid examination is diagnostic.
	Proctalgia Fugax	This is a well defined entity of vague etiology and pathology. Characterized by sudden, sharp, irregular attacks of pain in the lower rectum and anal canal. Has been termed a rectal neuralgia in the past. The term Proctalgia Fugax means fleeting rectal pain. Some suspect that it is only in internal sphincter muscle. May last up to 20-30 minutes, and patients cry with pain. Nitroglycerin under the tongue usually aborts an attack.
	Stenosis and Stricture	Especially if process is chronic. Anal stenosis usually is result of previous anal surgery. Stool is diminished in caliber, even to diameter of lead pencil. Stricture is result of inflammatory process. Straining on defecation, productive of a small caliber stool in patient free of anal stenosis or sphincter spasm is very suggestive. Sigmoidoscopic examination is diagnostic.
	Coccygodynia	Is common entity. Patient frequently describes his pain as arising in the rectum. This is not true. Pain usually arises in sacrococcygeal joint or muscles attached to coccyx, namely the levator ani, coccygeus, and a portion of the gluteus maximus. Digital examination is diagnostic.
	Intussusception	The nearer the intussusception is to the anus, the more pronounced will be the symptoms. Tenesmus and the passage of blood and mucus is the basis of suspicion, especially if the patient is under two years of age.
	Foreign Body	This is a rare cause of rectal pain. The history is diagnostic.
	Recto-Vaginal Septum Cellulitis	This inflammatory process precedes a recto-vaginal fistula. Bimanual examination may be essential to make the diagnosis.

Pain with Swelling	Ischiorectal Abscess	Severe throbbing pain present that is more or less continuous. Exaggerated by sitting and defecation. Fever and leukocytosis frequently present. May have induration on perineal floor between anus and ischium. Digital examination reveals intra-anal tenderness and swelling.
	Thrombotic External Hemorrhoid	Usually single. Is firm and causes throbbing pain. Commonest of all entities in this group. Bleeding may or may not occur. Usually absent.
	Prolapsed Anal Ring	The entire anal circumference possessing hemorrhoids is prolapsed. The pain is severe, continuous, and the swelling is usually irreducible.
Pain with Swelling & Bleeding	Prolapse of Rectum	The diagnosis is made by simply inspecting the anal orifice.
	Prolapsed External Hemorrhoids	Inspection makes the diagnosis.
Pain with Bleeding	Fissure in Ano	Sharp, cutting, acute pain inaugurated with beginning of defecation. Bleeding usually minimal and stains tissue only. May subside spontaneously only to recur at irregular intervals.
	Hemorrhoids	Discomfort and soreness in anal canal. Bleeding usually discolors water in bowl. Prolonged standing or physical exertion intensifies discomfort. May have prolapse. Tenderness present in rectum on digital examination.
	Proctitis	Tenesmus, pain, and fullness in rectum with tendency to frequent stools. Blood and mucus or mucopurulent material usually mixed. Tenderness present in rectum on digital examination.
	Facutital Proctitis	History of previous pelvic irradiation. Tendency to frequent stools. Sigmoidoscopic examination is pathognomonic.
	Rectal Ulcer	Lesion must be in lower half of rectum to cause pain. May be due to Tuberculosis, Lues, Malignancy, etc. Tenesmus, pencil stool indicative of sphincter spasm. Blood mixed with mucus in small amounts is present.
	Prolapsed Polyp	The polyp is irritated due to position. The bleeding depends upon the friability of the involved polyp. Pain is due to sphincter spasm. Ordinarily, a polyp does not cause pain.
	Chronic Ulcerative Colitis	Usually begins in rectum. Pain, bleeding. Discharge and diarrhea are often present. Disease is prone to develop anal complications. Anal surgery to be avoided in presence of Chronic Ulcerative Colitis. Sigmoidoscopic examination is diagnostic.
	Intussusception	Will be discussed under Pain.

Rectal Pain Not Due to Origin in Ano-Rectum	Coccygodynia	Previously described.
	Prostatic Abscess or Prostatitis	Defecation can be painful and difficult in presence of inflammatory prostatic disease. Palpation of prostate should be a routine part of rectal digital examination.
	Seminal Vesiculitis	Pain can occur high in rectum on urination, erection, ejaculation or defecation.
	Acute Pelvic Inflammatory Disease	Acute Salpingitis, Cul de Sac abscess, tubo-ovarian abscess can all cause pain in rectum, especially on defecation.
	Cul de Sac Abscess	Regardless of the origin within the peritoneal cavity, if an abscess is present in the Cul de Sac of Douglas, pain on defecation is frequently present.
	Vesical Calculus	The innervation of the bladder and the rectum jointly from S2, S3, S4, explains this occurrence.
	Ectopic Pregnancy	Especially prone to do so if blood accumulates in the Cul de Sac.
	Endometriosis	The reasons are obvious. Implants on the rectal wall or in the Cul de Sac cause pain.
Pain with Discharge	Ovarian Cyst	Depending upon its size or prolapse, pain occurs in the rectum.
	Fistula in Ano	Pain not always present with a fistula. If drainage is free and fistula has been present for sufficient time to permit the cellulitis to subside then pain is minimal. If the fistula is not draining and back pressure is building up so that an abscess will eventually occur, the pain is apt to be maximal. Adequate examination reveals cause.
	Perirectal Abscess	Swelling and discharge may accompany the pain. If the abscess has ruptured spontaneously, to all practical purposes, a fistula is now present.
	Submucous Abscess Ischiorectal Abscess Retro-Rectal Abscess	Have symptoms as above.
	Pruritus Ani	Discharge may or may not be present. This depends upon whether or not an associated proctitis is present. Another cause for discharge is whether or not a moist type of peri-anal dermatitis is present. The skin changes and history of itching is typical.
	Intra-Anal and Peri-Anal Condylomata	Some excoriations and pain result if the condylomata are present a sufficient period of time. Pruritus also present. Inspection will yield a proper diagnosis.
	Uterine Myomata (Fibroids)	The location and size of the myomata cause pressure symptoms.
	Pre-Sacral Tumors	Cause pressure symptoms and possible infiltration of rectal wall and pain results.

should tell the tone and competence of the sphincter, the sensitivity of the anal canal, coccygeal area and its attached muscles, the prostate, and if any swellings or obstruction are present in the anal canal. Then and only then should the anoscopic and sigmoidoscopic examinations be made.

These instruments are not the property of any one group of specialists, but are diagnostic tools for the medical profession. No cancer detection survey is complete without a sigmoidoscopic examination, for 17% of all malignancies occur in the rectum or colon.

The tables just enumerated clearly illustrate a basic point in the diagnosis of rectal pain—there is no substitute for a history and rectal examination. A

rectal examination consists of a digital, anoscopic, and sigmoidoscopic survey. There is no excuse for a physician to pass off a complaint of rectal pain as hemorrhoids without the above procedure.

Carcinoma of the rectum has not been stressed as a disease of the rectum, characterized by pain. If one waits for pain as a symptom before diagnosing a carcinoma of the rectum, then a mortician will be the proper consultant rather than the surgeon. Bleeding is a better sign to prompt a suspicion of carcinoma of the rectum, but the best indication to examine a patient for carcinoma of the rectum is the fact that he has a rectum and is over 15 years old. 201 South Main Street

Clini-Clipping

Idiopathic Dilatation
of the Bladder.



Health Insurance Comes of Age

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Pressure on the United States Government to play a large role in financing adequate health care for the American people is constantly increasing. The political campaign of 1956 witnesses renewed proposals by representatives of both parties for more adequate government participation. The recent extension of the Social Security to entire new areas of physical disability is an example.

The general theme is a continued implication that in this day of admittedly staggering medical costs, the problem is being inadequately met by existing voluntary organizations. Best known are the fast growing non-profit organization, Blue Cross and Blue Shield. Less known, though of vital importance, are the hundreds of smaller and larger insurance companies in the same business.

Voluntary health insurance is today the fastest growing form of insurance. Among the leaders in this field are The Metropolitan, Mutual of New York, Aetna Life, Travelers, Prudential, and Equitable, to mention only a few. All these growing companies are vigorously

competing with each other, and with Blue Cross and Blue Shield for better coverage and more policy holders, both as individuals and as members of a group.

By any measure, it may be fairly said that the business of health insurance is today big business, and we are rapidly reaching the point where the American without some form of coverage is the exception. A business with a volume of several billion a year and a vast potential has not, however, been created without trial and error; mistakes and criticisms. Misrepresentation by agents, as well as misunderstandings by individual policy holders has given ready fuel to the advocates of compulsory government insurance, in spite of the fact that no group of businesses is more constantly under individual state supervision. There have been individual attempts by companies to avoid paying legitimate claims. Instances of policy holders attempting to misuse their coverage are, on the other hand, not uncommon. Since few Americans actually know how, or even bother to read their policies, misunderstandings are bound to occur.

There are at present five main types of health insurances,

1. Loss of Income Insurance.
2. Hospitalization Insurance.
3. Surgical Expense Insurance.
4. Medical Expense Insurance.
5. Major Medical Insurance.

It is interesting to note the first type to be made available in the United States some half-century ago was a policy covering loss of income. It is equally significant to note that approximately 40 million people are now covered by this type of insurance.

Protection against the costs of hospitalization was organized during the depression days, and was instigated not by an insurance company, but by a group of Dallas school teachers in cooperation with the Baylor University Hospital. At that time for a payment of only \$6.00 a year, each individual received full coverage of hospital expenses, a semi-private room for three weeks, plus a discount for any longer stay. From this meager beginning evolved the tremendously successful Blue Cross movement. At present, more than 50 million Americans have a major portion of their hospital expenses covered by one of the eighty-seven Blue Cross plans. Large insurance companies, at first doubtful of the plans and principles of Blue Cross, have since rapidly climbed on the health insurance band wagon. At the present time, more persons are covered against the cost of hospitalization through insurance companies than through Blue Cross.

A major area of discussion is the extension of health coverage to doctors' bills. While varying within individual

companies, fees for medical and surgical benefits are included in many plans. Whether these are adequate in the face of rising medical costs, for both patient and profession, will be a matter of continued debate. So far, the fees allowed for office work are, in general, inadequate and tend, whether indicated or not, to make hospitalization a necessary and all too frequent part of illness. Many patients will, in fact, shop around for a doctor willing to put them in the hospital on a questionable diagnosis, for work which could be rightly done in the office. The honest doctor resents and deplores this trend. Such admissions add greatly to already overcrowded hospitals and this practice, if not corrected, will necessitate expensive and unnecessary hospital expansion. Recognizing this fact, health plans are working toward a better and more realistic coverage for office services. Insurance plans cannot continue to pay costly hospital bills for services, rendered equally well, and at much less cost at the office level.

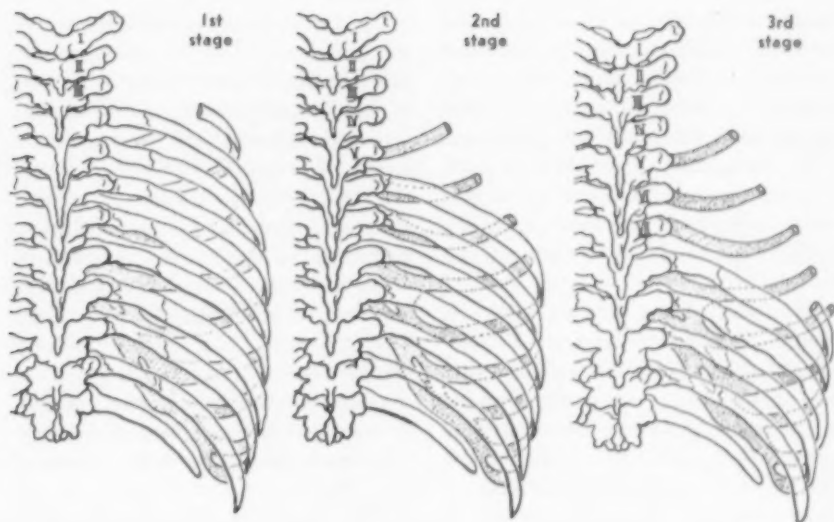
The big question for the profession is whether health insurance plans will set a national pattern for medical fees. The inherent danger in this situation is apparent. The answer is not only a constant vigilance on the part of our medical societies, but a vocal effort on the part of the individual physician to educate the patient. The increasing importance of annual examinations, and the practice of better preventive medicine will have a profound influence on the ultimate decision. One thing is clear, chain store medicine cannot be practiced and quality maintained.

Summary

Health insurance is here to stay, and the entrance into this field by large life insurance firms has given stature and added respectability. It is to the advantage of the American public to keep health insurance on a voluntary basis. Uncle Sam should supervise, but not participate. Competition is keen, supervision by all states increasingly effective, and the type of policy

constantly expanding. It is to be hoped that better policies and a rising reputation for integrity will still the paternalistic cries from Washington. Good health like good government is everybody's business. Both the profession and the public will benefit through the private expansion of health insurance on a fair and realistic basis.
85 Park Street

Clini-Clipping



(Radical Treatment) Rib removal in thoracoplasty operation. (after Orr)

Dermatalgia

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Before entering the subject of discussion, "Dermatalgia," it is very fascinating to dwell briefly upon the general anatomic and physiologic concept of this corporeal garment. This ailment is presented under the nomenclature of "Neuralgia of the Skin," "Dermatalgia," and "Rheumatism of The Skin." It is scantily mentioned in the textbooks of dermatology, and equally disregarded as an entity by the cleverest clinicians. But this dermal condition is frequently present as an integral symptom or as a conjointed expression due to a primary pathology.

Macroscopically, the skin is a soft, flexible, membranous covering of the entire organism, and fuses with the mucous membranes of the natural orifices.

Physiologically, it is an extensive and complex organ of secretion, elimination, heat regulation, protection, sensation and touch, and absorption. Because of its tissue structural elements, it is particularly adapted to resist light and heat as well as bacterial invasion, a barrier against force, impervious to fluids, and chemical irritants.

Anatomically, it is composed of a connective framework, with requisite blood vessels, lymphatics and nerves. The whole surface being shielded by a

covering of epithelium. It is divided into two principal layers, a deep portion, the corium, and a superficial portion, the epithelium.

The color of the skin is largely due to a deposition of an amorphous substance known as melanin. The function of this pigment is mainly protective, to shield the underlying structures from actinic effects of light.

The lymphatics of the skin consist of a series of closed vessels which accompany the blood routes. The skin is richly supplied with blood, a deep or subcutaneous plexus, and a superficial plexus. The nerves of the skin follow the general course of the blood vessels. They are both medulated and non-medulated. The main nerve trunks in the subcutaneous tissues give off slender branches which divide and subdivide, passing through the corium, forming subcutaneous plexuses. The free sensory endings are often bulb or knob shaped, or as minute enlargements. The tactile cells are found in the deeper layers of the epithelium.

The muscles of the skin are both striated and non-striated varieties. The striated are most numerous in the face and neck. The non-striated are more abundant, particularly in the scrotum, perineal and scalp regions.

The dermal sweat glands are modified tubular glands, occur in all parts of the body except the margins of the lips, the glans, and inner surface of the prepuce. The sebaceous glands occur in the corium on all parts of the body except in the palms, soles and terminal phalanges.

The sensory nerves include separate fibres for heat, cold, for light, pressure, and for tactile discrimination. Pain at surface points can usually be accurately localized. On the other hand, pain arising in an internal organ can seldom be accurately oriented; in fact, it may be misreferred as a reflected pain to some distant point on the skin. The pain nerve like that of temperature and pressure has punctiform distribution. The threshold stimulus for pain is commonly lighter than for pressure points.

From its position the skin is exposed to more forms of irritation than any other organ. The changes that take place in it as a result of disease follow essentially the same laws as those occurring in other parts of the body. It may follow direct irritational changes, blood, lymph and cutaneous nerve lesions. The factor of age, sex, susceptibility, race, seasons, occupation, prevailing organic and constitutional diseases, focal infection, allergy, bacterial products, and nervous elements, are causative factors.

Painful sensation of the skin without definite or marked external alteration is a definite entity. This malady is usually primary, and less frequently caused by nerves of the periphery or cord. The areas affected are those where pressure is produced on lying down, sitting posture, the outer surface of the arms, especially the deltoid, and outer surfaces of the forearms, the thighs and legs. The hairy regions of the thorax and

pubis are less frequently involved. Regions where pressure of the clothing is present, as the waist line from belting, shoulders and back from trouser supports, around the legs from ring-like tightness of the stockings are prone to develop sensitiveness. It may be limited to the scalp, spine, palmar and plantar surfaces.

Lues, rheumatism, and locomotor ataxia where the feet are involved, may result in dermal hyperesthesia. Gastric conditions as dyspepsia, ulcer, and gastritis may cause the pain to locate in the interscapular and epigastric regions. It may also begin with the advance of the menopause. It may be associated with uterine disorders. Dermatalgia may be focused at the brows and wrists. Hyperesthesia of the skin may be idiopathic or symptomatic, unilateral or bilateral. Individuals subject to hysteria and disorders of the nervous system are frequently implicated. This disorder is much more frequently partial than general, and is possibly an expression of some disease of the nervous system and tracts. It is observed usually in middle life and in women more than men.

This phenomenon may follow or co-exist with chronic diabetes, rheumatism, anemia, debility, severe exertion, exposure to cold, and mental upsets. Long confinement to bed caused by illness and luetic conditions may also exhibit this process. It may follow proliferative arthritis and pregnancy. To repeat, in this condition there are painful sensations of the skin, without evident cause. It may be associated with cutaneous hyperesthesia, or with painful sensations in the structures underlying the skin. Many forms of malnutrition and hypoavitaminosis exhibit dermal pain.

The appearance of the sensitive areas

is normal in most instances. In rare occasions, there is a slight yellowish or red tinge recognized on careful scrutiny. Those spots may exhibit a mild pruritic dermatitis following chronicity.

The diagnosis depends upon the symptoms, observation, the patient's history and the awareness of such a phenomenon.

The symptoms are characterized by dull pain localized in large or small areas, burning, stinging, aching, and general discomfort. The symptoms vary in severity from slight burning to a state of torture. The pain also resembles that of friction, penetration, and contusion. The pain may be transmitted to the underlying structures, causing stiffness and discomfort during daily activities. It is very annoying during sleep, compelling the person to turn restlessly from side to side and not finding a comfortable position to rest. The aching and discomfort may travel from one area to another along the nerve course. The pain may prevail during the entire day causing much annoyance and irrita-

tion. The complaint expressed by the patient as feeling to "Jump out of the skin." This complication may terminate spontaneously, or may reappear at certain seasons. Abnormal states as physical and mental stress, constipation, exposure, excessive sweating and profuse menstruation, may trigger onset.

Treatment should consist of removing heavy irritating clothing and blankets. The omission of greasy foods, spices, too much sweets and condiments is advantageous. Exclusion of drugs, foods and clothing material causing allergy is pertinent. Drugs as quinine, salicylates, certain anodynes, iron, arsenic, should be curtailed. Starch baths, Novocain injections, spraying with ethyl chloride, or Pontocaine solutions, calamine lotion with benzocaine or cocaine, and special dusting powders, are effective. Some cases respond to hot or cold showers. Violet ray, galvanotherapy or high frequency voltage may be useful. The cortisone steroids orally, locally, or parenterally in some cases bear good results.

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Acne Vulgaris

Practical Hints in Dermatology

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The medical practitioner has a duty to the patient with acne vulgaris. The young person with acne approaches his family doctor for relief. He gains his first independent impression of medicine. You keep the confidence of the youthful into ripe old age by your actions. A good rule: recall your own youth and the way you felt with your acne!

Old time skin specialists were gentlemen with frock coats and glasses on a black string. They examined the patient presenting symptoms on the skin. Their purpose was to distinguish syphilitic from non-syphilitic eruptions. The various and sundry European schools of thought of dermatology included the Vienna School of thought, the French School of thought, and the English School of thought. They differed in their thoughts on etiology, the internists versus the externists; versus in-externists. They agreed on observation and classification—hence acne.

Acne vs. Acme

Acne is given a number of derivations. Blakiston's New Gould Medical Diction-

ary says: perhaps from the Greek — Achne — chaff. Stedman's Practical Medical Dictionary states: probably a corruption (or copyist's error) of Greek Akme — point of efflorescence.

Acne is part of the name of a list of dermatologic conditions. Our immediate interest is acne vulgaris—the eruption of the young. Acne vulgaris is prevalent. It is possible to claim it is not a disease but a physiologic state. It is almost universally expected at the crucial period when boys turn into youths, and girls become young ladies. The synonym for acne vulgaris is acne juvenilis.

Cause

Guesses as to the actual immediate etiology of acne vulgaris seu juvenilis are fruitless. It is possible to predicate the origin to the ever diminishing hirsute covering of the face, cheeks, chest, and back of our current generation of youthful people. The pilo-sebaceous apparatus of the hairy faced consists of a hair follicle of concentric dermic and epidermic

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structures. The hair represents the corneum of the flat skin. The sebaceous sac, improperly considered and called a gland, represents modified prickle cell layer. Definitely, no duct exists from the sac to the aperture on the surface. The autolized cellular debris from the sebaceous sac is pushed to the aperture around the hair. You visualize a number of anatomic histologic situations. The sac provides no sebum. The sac provides sebum. The sebum is hard or horny; soft; exceedingly soft or oily. The hair may be absent from the follicle. It may provide the normal space for advance of the sebum material from sac to surface. The hair may be extra thick or so close to the follicle wall as to prevent passage of the sebum. You arrange and rearrange the possibilities. For example, one group consists of no hair and too much sebum. Sebaceous cyst is the result.

The importance of the sebaceous sac in acne vulgaris is obvious from examination of the patient with acne juvenilis. A disorder of the scalp, either seborrhea or a condition very closely allied to it, co-exists in each patient. If your patient whom you consider has acne vulgaris does not have seborrhea, you must change the diagnosis to an acne-like condition!

Therapy

Your hormonal therapeutic approach depends on your interpretation of the various claims for endocrine influences in etiology of acne.

Diet is implicated in acne vulgaris. Directions for the patient stress low carbohydrate intake. The direction is taken seriously. The patient becomes underweight, and undernourished. The acne vulgaris continues as a cachetic acne.

Conclusion: diet according to ideal weight. Reduce overweight. Maintain normal weight. Try to increase underweight patient.

The general practitioner rarely utilizes roentgen ray in therapy. Some few dermatologists formerly enthusiastic regarding the good effect of roentgen exposure for acne vulgaris recently changed their opinion. They join the writer in his long-standing advice and practice to postpone roentgen radiation until all other forms of therapy have failed. Then underexpose the patient.

Exposure to ultraviolet radiation from effective mercury vapor arc in quartz emanators, or high voltage carbon arc with cored carbons give patients a pleasing temporary cosmetic result. It does not cure acne vulgaris.

Selected antibiotics—terramycin, for example—improve the appearance of the pustular acne vulgaris due to the effect on sensitive secondary invading bacteria.

These statements should not give the impression the thing to do is to let nature take its course. An earlier generation of family doctors advised washing with tincture of green soap and water. It was good medicine in the day when the reaction released four per cent of free alkali. The same combination today has a potential of only four-tenths per cent free alkali!

"White lotion," or *lotio alba*, is recalled by physicians. The ingredients are forgotten. The name lingers on. *Lotio alba*, the conventional product, is without merit.

Later you learn external, topical, rational pharmaceuticals for the care of the scalp, hair and skin of the patient with acne vulgaris.

Analyze the anatomic physiologic en-

tity of acne vulgaris in the pure, virginal or untreated state:

a. Seborrhea or seborhea-like eruption of the scalp.

b. Possible but not likely part played by so-called Unna bacillus or similar organism.

c. The principal or primary lesion of the special category of acne vulgaris is the comedone or blackhead. It is composed of exuded autolyzed prickle cell prototypes of sebaceous sacs. The dark external or free extremity is due to the oxidation—not dirt.

d. The keratin of the comedone acts as a foreign body. The dermic reaction produces the pus pimple.

e. Roving fingers rupture the pus pimple. Internal pressure causes a break through on the skin surface near the pilar aperture.

f. Further infection arouses reaction of furuncle.

g. Inflammatory changes in skin surround each lesion.

h. Infiltration of skin.

i. Healing with scar in midst of new lesions.

The usual, conventional patient with acne vulgaris reaches the physician in practice *after* self-treatment, care in barber and beauty shops, faddists, other physicians. The previous technics of treatment for acne included:

a. Over-treatment (?) with pharmaceuticals.

b. Peeling, superficial or deep.

c. Scarification.

d. Carbon dioxide sludge or ice.

e. High frequency discharge—effluve or needle.

f. Ultraviolet.

g. Roentgen radiation—too much or too little.

h. Surgery.

Chart

ACTION OF REDUCING AGENCIES (ACCORDING TO UNNA) IN CONCENTRATION OVER SIX PER CENT

1. Horny layer becomes thicker, i.e., more marked cornification.
2. Dark color of horny layer.
3. May cause pain; seldom itching.
4. Inflammation; walls of papillary blood vessels are damaged, exudation occurs.
5. Edema; bullae in prickle layer; horny layer is undermined, thrown off, hence, useful in acne, boils, etc.
6. Collagenous tissue of cutis is softened. Therefore useful in:
 - a. Hardened tissue of infiltration
 - b. Scleroderma
 - c. Scars and keloid
7. Action on parasites and bacteria.
 - a. Removal of parasites and bacteria through necrosis of superficial cells of the epidermis; and organisms are removed with necrosed cells.
 - b. Destruction of organisms requiring oxygen because the reducing agencies (according to Unna) draw oxygen from the tissues.

i. Psychotherapy

j. Dermabrasion.

Your Regimen

The physician undertakes the care of the patient with acne vulgaris. He recognizes acne is not treated. It is the patient with acne. It may be the family of the patient with acne. It may include the home, the school, the job location. It may include the boss, the teacher, the girl or boy friend (or the absence of any of these). It may mean the family, the neighbors, and the community.

That is a short list for the physician. It could be lengthened to include all human fears, ambitions, doubts. Each physician has his method, his modalities, his approaches. His successes are with patients vulnerable to these. His failures

leave for other healers vibrating in their wave length, or frequency.

The family doctor rarely knows the true details of the patient's life and living. He must learn: does the patient live alone? With the family? As a boarder or lodger? In a rooming house or hotel? Does he have hot water available at all hours? Are there facilities for private, prolonged, oft repeated washing? Is there a place to make the applications of clay, or lotions, or foul odorous liquids? Does the patient have a controlled environment to follow directions? Must directions be modified? Has the patient anyone to help make applications to the scalp and the back?

The patient has a long list of questions. Are you happy to have me as a patient? Are you willing to utilize your knowledge to help me for the financial return I can afford? Do you have the time? Is your office space arranged to permit me to stay sufficiently long for good therapeutics? Do you do the mechanical work? Will it be assigned to a trained, untrained or partially trained technician? Will the same person take care of me at each visit? Will the appointments interfere with work, school, family duties? It boils down to this—the big, big question: Doctor, will you treat me as if I were your child?

The problem of the external, topical pharmaceutical rational treatment is to reduce the poor appearance of the skin of the patient with acne vulgaris. The ill-effects of what was done or left undone in previous attempts to relieve the patient must be overcome.

FIRST

The seborrhea or the seborrhea-like scaling of the scalp demands attention. It may be necessary to have the patient

cut the hair shorter and sometimes real short. Do not insist if the pride and glory of the patient resides in those long worn locks. Insist on scalp care and hair dressing. Interest the patient in doing this rather than hire somebody else.

Formula 1. Scalp pomade—water soluble—apparently absorbable.

Glyceryl monostearate	20.
Castor oil	4.
Corn oil	2.
Mineral oil, low viscosity	4.
Stearic acid	4.
Cetyl alcohol	2.
Stenyl alcohol	1.
Water, sufficient to make	100.

Directions for pharmacists: Melt the fat-like solids. Warm the oils. Heat the water to the same temperature. Mix. Agitate mechanically until cream forms.

Directions for patient: Massage a little of the pomade into the scalp once a week or more often as required by the scaling of the scalp. Retain overnight. Next morning, wash the scalp and hair with the soapless shampoo. Follow by rinsing with after rinse.

Formula 2. Soapless Shampoo.

Sulfonated castor oil	60.
Mineral oil, low viscosity	40.

Directions for pharmacist: Mix the oils.

Formula 3. Alternate soapless shampoo.

Ammonium lauryl sulfate (sapon L-22)	50.
Sulfonated castor oil	50.

Directions for pharmacist: Mix the oils.

Directions for patient (2 or 3): Dilute the formula, one part to ten of water. Apply to scalp.

Formula 4. After rinse.

Sodium hexametaphosphate	1.
Water, sufficient to make	100.

Directions for pharmacist: Dissolve the powder in the distilled water.

Directions for patient: Dilute one tablespoonful in four tablespoonsful of water. Rinse the hair after shampoo. Repeat. Follow with plain water rinse.

SECOND

The physician examines the condition of the skin. He analyzes and decides: Is the skin fit for treatment now? Should a rest period be given? What external topical remedy is safe? What will make the skin look better? The physician places the skin of the patient into one of the three main categories.

1. Immediate reaction to insult—formerly acute phase of dermatitis.
2. Subsiding phase of immediate reaction to insult—formerly the sub-acute phase of dermatitis.
3. The infiltration phase of reaction to insult—formerly the chronic phase of dermatitis.

Immediate Reaction to Insult

The patient with overtreated skin, with acute dermatitis, immediate response to insult from any cause is treated according to this indication. The patient in this phase of reaction is not subjected to "acne treatment." One prohibition in topical therapy of the skin of the patient with acne is grease application. Efforts to reduce the redness, swelling, oozing, pain of the immediate reaction to insult include application of cold, crushed ice, cloths soaked with ice water, milk, and water modified by solution or suspension of mineral gels, as bentonite, vegetable glues as starch, bran, oatmeal (including the recently

available concentrate from oat meal—a gum-like fraction requiring no boiling).

Formula 5. Bentonite gel.

Bentonite	4.
Water, sufficient to make	100.

Directions to pharmacist: Dust the powdered bentonite over the surface of hot water in a jug of large diameter. Let stand for a few hours. Agitate. (These directions vary from official preparation.)

Directions to patient: Apply the sludge to inflamed skin. Permit to dry. Moisten and remove. Reapply frequently.

Formula 6. Starch paste.

Starch	24.
Water, sufficient to make	100.

Directions: Rub the starch in cold water until smooth. Heat with constant stirring until color changes and translucent paste forms. Apply to the inflamed areas. Remove by moistening with water to soften.

Subsiding Phase

The immediate phase of over-treatment of the skin of the acne patient soon passes into the subsiding phase. It may be difficult to say when one ends and the other begins. The ban on grease vehicles makes the soap base cream essential for the topical application. The next formula is also utilized as a cream base, foundation cream, cleansing cream by the ladies, as a preliminary shaving application, also as an after-shaving soothing agency.

Formula 7. Soap base cream.

Stearic acid	12.
Glyceryl monostearate	4.

Mineral oil, low viscosity	4.
Corn oil	1.
Castor oil	1.
Glycerin	1.
Sorbo	1.
Propylene glycol	1.
Triethanolamine	1.
Borax	0.6
Water, sufficient to make	100.

Directions to pharmacist: Melt the fat-like solids. Warm the oils. Heat the water in separate container to same temperature. Add the triethanolamine and borax to heated water. Mix all with mechanical agitation.

Directions to patient: Apply the cream freely to affected areas.

Infiltrate Phase

The physician recognizes the infiltrated phase of reaction to insult. The skin is thick, it is dark. The blackhead, the pustule, the furuncle and the scarring of the acne vulgaris are present. The rational pharmaceutical approach to the dual problem requires one form of topical medicament—namely, chemical reducing agencies (according to Unna) in concentration of more than six per cent.

Recently formed or nascent polysulfides of hydrogen are reducing chemical agencies (according to Unna). They are provided by a properly made "two bottle lotio alba."

Formula 8. Two bottle lotio alba.

Bottle one: Potassa sulfurata	8.
Water	50.
Bottle two: Zinc sulfate	8.
Water	50.

Directions for pharmacist: Dissolve large pieces of potassa sulfurata in the water. Filter. Label Bottle One. For

Bottle Two: dissolve zinc sulfate in water and filter. Label directions follow.

Directions for patient: Bottle One: Apply a little of content to each blemish using cotton on toothpick. After drying cover each yellow stain with little of content of Bottle Two using a clean toothpick and fresh cotton. Rub with fresh applicators.

The potassa sulfurata solution is alkaline. The zinc sulfate solution is acid. The mixture of the two releases polysulfides of hydrogen where most needed—the lesions. It is possible to depend upon solution of potassa sulfurata alone; or its chemical partner, solution of calx sulfurata (Vlemminck's solution). The addition of the acid solution fosters complete destruction of the sulfurated solution and formation of maximum quantity of the gaseous polysulfides of hydrogen.

Polysulfides of hydrogen are reducing agencies (according to Unna). They act to cause dermatitis in concentration over six per cent. The skin must be irritated in the effort to help the patient secure a good cosmetic result on the acne skin. The physician tells the patient: You must look worse before you look better.

Commercial pharmaceutical houses offer effective substitutes for the solution of potassa sulfurata. Calx solution or the material for its formation is available from one chemical firm. Still another firm markets a powder mixture equivalent to potassa sulfurata and zinc sulfate. Thus the physician need not depend upon the local pharmacist to have freshly made potassa sulfurata in large junks on hand for your prescription.

Removal of comedones by the physician or his assistant is facilitated by formation of a soap of the fat-like sebum and an emulsifier.

Formula 9. Emulsifier for sebum

Triethanolamine 4.00

Water, sufficient to make 100.

Directions for pharmacist: Mix

Directions for use prior to comedone expression: Massage a little of the mixture into the area of comedones. Use a brush. Express the blackheads. Wash.

The foregoing offers the physician a

mode of approach to the problem of the treatment of the acne skin with promise of ultimate improvement in appearance. Willingness to accept the responsibility, interest in restoring the patient and his skin to normal, and experience to vary the procedures to meet emergencies are essential.

18 East 89th Street.

**AN EXERCISE
IN DIAGNOSIS—
THE CASE REPORTS**

IN addition to our regular quota of original articles, "Refresher" articles and departments, this issue, and every issue, contains selected Case Reports. You will find them on pages 304-311. We recommend these studies as interesting and stimulating.

Thermal Burns

Histopathological Findings after Treatment with an Ointment

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Aloe vera, mostly known as stomachic and purgative, has been also used for a long time in juice form to treat contusions and ecchymoses. The observation of Collins et al. that X-ray dermatitis could be successfully treated with fresh aloe leaf opened a new series of studies on aloe vera extracts and their therapeutic properties.

Wright considered the results of the treatment with fresh aloe juice of early X-ray damage most encouraging. The rapid improvement and healing of lesions of long duration as ulcers on amputation stumps, ivy poisoning and palmar eczema using aloe powder and aloe ointment, led Crewe to summarize the properties of these preparations of aloe as relief of pain, burning and itching, some sort of antiseptic activity and stimulation of tissue regeneration.

Cases of roentgen ulcers are reported by Loveman, in which complete healing followed the use of the fresh whole leaf of aloe vera. The treatment was more effective in ulcers of recent formation. Rowe et al. reported beneficial effects of

treatment with aloe vera in white rats with third degree X-ray burns and concluded that the pulp of the leaf fresh as well as partially decomposed, definitely increased the rate of healing of such experimentally produced reactions. They suggested that the healing agent is concentrated in the cortex of aloe vera. Their experiments with aloe ointment, however, were not so successful due probably to loss of active principles. A better preparation of aloe vera ointment gave Lushbaugh and Hale definite good results in rabbits irradiated locally on the back with beta radiation.

An ointment made from aloe containing highly concentrated and stable leaf extract, (Ver-a-loe manufactured by Florida Laboratories Inc.) has been made available to us and we found interesting to study the histopathological changes in experimental burns in order to test its effectiveness.

Experimental Procedures Twelve albino rabbits weighing from 2.5 to 3 Kg., were used in these experiments. Their backs were shaved and a third

degree burn was produced using a hot plate measuring 4.5 cm in diameter. The thermal burns were all of the same extension and degree.

Four rabbits were kept untreated as controls, four rabbits were treated with the aloe ointment immediately and four rabbits were treated with the ointment starting 48 hours later. All the animals of the second as well as of the third group were kept constantly under treatment.

At the end of the third week skin specimens of treated rabbits and of the controls were taken for histopathological examination. Paraffin sections were stained with hematoxylin and eosin. After four weeks liver and kidney of the animals under aloe treatment as well as of the controls were histologically examined.

Results

Group I Control rabbits. In all these animals a severe process of skin necrosis was produced and a thick eschar mainly composed of thermally coagulated epidermis and dermis, firmly adherent to the underlying tissue, did develop. After twenty days the eschar tended to separate from the underlying granulation tissue leaving an area of ulceration which corresponded to the size of the plate used for the thermal burning. In all these untreated cases the ulcer produced had the general aspect and gross changes of the severe untreated burn.

Histological changes in untreated control animals:

The biopsy specimens of skin of the untreated rabbits show extensive coagulation necrosis of epidermis, dermis and subcutaneous tissue, multiple perivascular hemorrhages, diffuse polymorphonuclear and giant cell infiltration, capillary thrombosis, dermal edema and epider-

mal desquamation, intravascular clotting and diffuse dermal infiltration. These tissues thermally treated did show a very modest fibroblastic activity; also there was only a moderate increase of polymorphonuclear leukocytes in peripheral blood.

Group II Rabbits treated, immediately after burning, with aloe vera ointment. The burned areas were kept continuously covered with ointment. The latter was only removed for gross examination of the effects and always immediately replaced with new dressing. Only superficial debridement took place and the dermis at the end of the third day was uniformly edematous, soft and congested. The treated area of skin was not adherent to the underlying tissues. No shrinkage and no formation of ulcer edges with sloughing of necrotic tissue developed. After twenty days all lesions were grossly healed and well epithelized.

The biopsy specimens of the skin showed the following histological changes: epithelial regeneration and marked fibroblastic activity of the dermis, epithelial hyperplasia and focal dermal activity of leukocytes and macrophages, intensive perivascular and extravascular polymorphonuclear and round cell infiltration, marked fibroplasia and collagen production, marked activity of repair and regeneration of capillaries.

Group III Rabbits treated with aloe vera ointment starting 48 hours after burning the skin. During the first two days the gross appearance and changes were the same as for the control rabbits of the first group. After dressing with the ointment was started one could observe during the first week a more abundant debridement of the superficial

skin layers than in rabbits of the second group which were treated immediately after burns. However in no cases did an ulceration of the skin develop. There was a progressive softening of the thermally treated tissue and at the end of the first week abundant superficial debridement, congestion and edema. After twenty days these lesions were almost completely healed without sloughing of larger masses of necrotic tissue.

Histopathologically the skin specimens of this third group of rabbits, taken on the 20th day, were strictly resembling to those obtained at the same time from the second group of rabbits. The delay of 48 hours in starting the treatment with the aloe ointment produced only superficial ulceration of the skin and more abundant polymorphonuclear infiltration of the dermis.

Peripheral blood smears showed in group II and III a marked increase of polymorphonuclear leukocytes during the entire period of experiment.

The histological examination of kidneys and livers of treated and untreated animals, four weeks after starting the experiments, did not show any unusual changes.

Discussion and Conclusions The histological findings of the first group of rabbits used as a control and those present in the second and third group of rabbits show that thermal coagulation changes, hemorrhages, capillary thrombosis and following necrosis can be prevented and successfully treated

using this aloe vera ointment. Epithelial hyperplasia, intensive fibroblastic activity and perivascular infiltration with polymorphonuclear leukocytes show evidently in the treated animals that aloe elements have definite activity on cell growth. The process may be primarily that of an extensive hyperemia improving the oxygen supply to the tissues and secondarily that of an active regeneration of collagen. The production of substances promoting the polymorphonuclear and round cell infiltration may also be responsible for the rapid improvement of the histopathologic and metabolic changes elicited by thermal burns.

Summary

The ointment of aloe vera (*Ver-a-loe*) had a remarkable curative effect on thermal burns experimentally produced in rabbits. The treatment with this ointment accelerated the reparative processes, reduced the extension of necrosis and prevented ulceration of the skin.

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Periarteritis Nodosa

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Periarteritis nodosa is a collagen disease primarily affecting the blood vessels.

As early as 1755, Mantani described nodules upon small arteries; however, he made no correlation with any disease state. Rokitansky again described the pathology of the disease, but went no further. It was left for Kussmaul and Maier in 1866, to present the case of a 27-year old male. He had symptoms of weakness, fever, paraesthesias, etc. and went progressively and relentlessly downhill. In the terminal stages the patient developed subcutaneous nodules, crampy abdominal pain and other symptoms. At postmortem, small, whitish, pea-sized nodules were found in the muscles, mesenteric vessels, but not in the lungs. On gross examination, they thought this was a parasitic infection, at first; only after microscopic inspection were these nodules found to be aneurysms of the small and medium muscular arteries. It was thought that this was an inflammatory process, beginning in the internal vessel wall and spreading outward. Kussmaul and Maier

named this disease periarteritis nodosa, and thought it was caused by bacteria. The sections were sent to Virchow who thought these lesions were due to syphilis since he had seen similar ones before in that disease. This theory of bacterial or luetic causation and the gross pathological criteria for diagnosis prevailed until the end of the 19th century. The diagnosis was never made clinically before death.

Fletcher, in 1892, thought periarteritis nodosa was a generalized infectious process, which spared the pulmonary arteries, but not the bronchial arteries. In 1903, Ferrari recognized that all coats of the arteries were involved and suggested changing the name to polyarteritis nodosa.

Freund, in 1899, found that the arterial lesions were not aneurysms, but areas of necrosis with secondary aneurysmal dilatation.

In 1905, Monckeberg was the first to find microscopic lesions in the pulmonary arteries as well as in the bronchial arteries; however, it remained for Ophuls, in 1923, to change the patho-

Classification of the Necrotizing Angitides

TYPES OF LESIONS	ASSOCIATED CLINICAL CONDITIONS	DURATION OF TERMINAL ILLNESS RELATED TO VASCULAR LESIONS	CALIBER OF VESSELS INVOLVED	SITES OF PREDILECTION AND DISTRIBUTION	SPECIAL FEATURES OF LESIONS	OTHER FREQUENTLY ASSOCIATED LESIONS	HEALED STAGE
Hypersensitivity angitis	Hypersensitivity to serum, sulfonamides, drugs, etc.	Few days to few weeks. Usually less than 1 mo.	Arterioles, venules, capillaries and small arteries	Kidneys and heart. Usually widespread. Often in pulmonary vessels and splenic follicular arterioles. Uncommon in pancreas and gastroenteric tract	All of about same age. Exudative reaction.	Interstitial inflammation in viscera. Necrotizing glomerular nephritis	Uncertain
Allergic granulomatous angitis	Asthma and other allergic states, with bouts of fever and eosinophilia	Several months to several years.	Probably any sized vessels, especially small arteries and veins	Heart. Widespread. Often in pulmonary vessels and splenic follicular arterioles.	Various ages. Necrosis of eosinophilic exudate. Multinucleated giant cells. Granulomas.	Granulomas in extra-vascular connective tissues and serous membranes. Loeffler's pneumonia. Sequelae of vascular obstruction	Nonspecific scarring
Rheumatic arteritis	Fulminating rheumatic fever	Masked by rheumatic carditis	Small arteries and occasionally veins	Heart & lungs. Occasionally widespread. Uncommon in pancreas and gastroenteric tract	Associated with Aschoff bodies. Otherwise simulates hypersensitivity angitis	Rheumatic carditis, pneumonitis & aortitis	Nonspecific scarring
Periarteritis nodosa	Polyn neuritis, fever and "multiple systems disease," usually with hypertension	Several months to a year or more	Small and medium sized muscular-type arteries near hilum of viscera, in striated muscles, and near peripheral nerves	Bifurcations & branchings. Common in wall of gastroenteric tract, near mesenteric attachment, in pancreas & kidneys. Often widespread. Usually absent in pulmonary vessels and splenic follicular arterioles	Various ages. Proliferation precedes exudation in adventitia. Forms granuloma. Prone to form small aneurysms	Sequelae of hypertension & vascular obstruction through segments of wall with focal rupture of media. Aneurysms	Marked distortion of vessels. Scars sweeping through segments of wall.
Temporal arteritis	Pain over involved vessels, malaise, fever, anorexia	Nonfatal	Temporal & other cranial arteries	Temporal arteries	Multinucleated giant cells. No tubercles. No aneurysms	Cellulitis of contiguous tissues	Spontaneous regression or non-specific scarring

logical criteria for diagnosis from an entirely gross one to one which included the disease forms where the lesions were only microscopic. These were his ten distinguishing findings:

1. Almost complete absence of gross nodules. No aneurysms.
2. Granulomatous lesions in serous membranes. Marked polyserositis.
3. Eosinophilic infiltrations of the bronchi.
4. Extensive involvement of small arteries and veins in the lungs, with heavy infiltrations of eosinophils.
5. Eosinophilic infiltrations in the lung tissues. No bacteria found.
6. Extensive involvement of veins as well as small arteries in many viscera.
7. Extensive infiltration of spleen and lymph nodes with eosinophiles.
8. Extensive infiltration of mucous membranes with eosinophiles.
9. Extension of the lesions of vessels to surrounding tissues in the heart and kidneys.
10. Absence of severe lesions in the gastroenteric tract.

In 1925, Gruber was the first to postulate that the disease might be due to non-specific agents, with the lesions being part of a systemic hypereergic reaction. This fact was corroborated by a large amount of experimental work in the 30's and 40's. Klinge reproduced the lesions in the rabbit by repeated foreign serum injections. Rich found the lesions in serum sickness.

Still, the varying manifestations of the disease were grouped into one disease entity.² Zeek and her group, in the late 40's, postulated a definite subdivision of this disease into five entities:

1. Hypersensitive angitis
2. Allergic granulomatous angitis

3. Rheumatic arteritis
4. Periarthritis nodosa
5. Temporal arteritis

Etiology of periarthritis nodosa remains obscure.

Until 1925, the disease, at various times, was considered caused by bacterial infection, syphilis and animal parasites. Gruber was the first to postulate that periarthritis nodosa was due to systemic hypersensitivity. Arkin believed that it was a post infectious mesarteritis. He also considered the cause to be possibly viral. Rich produced the disease entity in rabbits by repeated injections of horse serum, also by a single injection of horse serum; however, this latter finding has not been confirmed by other investigators. Furthermore, he found that patients with serum sickness following anti-serum therapy had the typical lesions of periarthritis nodosa.

The advent of sulfanamide therapy greatly increased the incidence of periarthritis nodosa and there seemed to be a direct relationship of some patients, who had had allergic manifestations to sulfa, i. e., skin rash, later going on to die of periarthritis nodosa. Periarthritis nodosa has developed following thiouracil, colchicine, stilbamidine, *DOCA* and *STH*. Also, periarthritis nodosa has followed glomerulonephritis and rheumatic fever. Experimentally, the typical lesions have followed long term therapy with estrogens followed by *F.S.H.*, in rats.

The pathological changes of periarthritis nodosa have been found in patients with long-standing hypertension that has become malignant and also malignant hypertension. Whether hypertension is a causative factor is problematical. Zeek thought so and

Wilens and Glinn were not sure, but 11% of their cases of Bellevue patients had antecedent hypertension. Furthermore, 38.7% of their 94 cases had hypertension at the onset of disease. These patients may have had hypertension prior to their admission to the hospital, but this could not be proven. They also discovered that the lesions were mainly limited to the splanchnic vessels and the heart in patients with initial hypertension, while those with no or terminal hypertension had more diffuse involvement. Zeek quotes two reports of Eisenmengers, complete with pulmonary hypertension, that went on to develop periarteritis nodosa of the pulmonary bed only.

Rich postulated that in those patients where history of drug or serum sensitivity was not illicit, the disease was due to auto-antibody formation with periarteritis nodosa secondary to that. There are, however, still many cases for which no cause can be found.

Pathology Kussmaul and Maier first described only gross lesions affecting the medium-sized vessels of the mesenteric bed and the muscles; however, the lesions have been found in all organs. The disease chiefly involves the small elastic and muscular arteries and rarely the veins. Early lesions consist of degenerative changes in the media, edema and fibrinous exudate showing a few lymphocytes. This is followed by an acute inflammatory stage with infiltration of the media adventitia and, sometimes, interna, by poly's and/or eosinophiles. This does not uniformly involve the whole vessel, but only in spots. (This gave the original nodosal description.) This goes on until the entire vessel wall is replaced by fibrinoid material. The vessel may thrombose or an aneurysm

may form with secondary rupture and hemorrhage. If the process goes on to heal, the vessel wall is replaced by fibrous tissue and none of the original architecture remains.

Other types of lesions have also been found by Rich and others. They have found Aschoff bodies in the cardiac muscle and "valvular" vegetations as seen in *RHD*. Also the vascular lesions in the kidneys have mimicked glomerulos-nephritis in all its stages.

Zeek found that periarteritis nodosa, following certain drug and bacterial sensitivities mainly attacked vessels of certain organs; and, periarteritis nodosa, following hypertension or no history of allergy affected others. She formulated the theory that periarteritis nodosa can be subdivided into several categories, both clinically and pathologically.

Clinical Findings Periarteritis nodosa can manifest itself in almost any symptom complex depending on what specific blood vessel or circulation is involved in a particular organ. The incidence is 3:1 in favor of males, and was found, by Griffith and Vural, in about one in a thousand autopsy cases. There is no age incidence. The youngest case was in a 10-day old infant and the oldest at 77 years; however, the disease is most common in the 20 to 40 age group. The disease is usually insidious in onset, but may be acute and fulminating in cases classified as hypersensitivity, angitis, fever, malaise, cachexia, leukocytosis, hypertension, abnormal urine and pain in some organ of the body is prevalent in more than 50% of the cases.

Peripheral neuritis, cerebral symptoms, arthralgia, ulcerated skin, subcutaneous nodules, pulmonary symp-

toms, G.I. symptoms, such as mesenteric thrombosis and melena, are seen in about 50% of cases.

Surprisingly, in Mowrey's survey of 607 cases, there was a history of allergies in only 12% of the patients. Wilson and Alexander reported 18% among 300 cases.

Fever may be low grade, continuous or intermittent, but was found in 68% of Mowrey's survey. Prolonged afebrile periods were, however, not uncommon. The leukocytosis was mainly in the polymorphonuclear percentage. Eosinophilia was usually found in patients with a previous history of allergies (94% in one series) that went as high as 84%. The majority of patients had a marked secondary anemia. Dameshek reported two cases in which patients had a marked hemolytic anemia. One of these had an abnormally high platelet count and the other was not reported. Cryoglobulinemia has also been seen with periarteritis nodosa. The lupus erythematosus cell phenomena has been reported by Lincoln, Ricker and others.

Arthralgia, polyneuritis and myositis were seen in better than 50% of the patients. The neuritis is usually asymmetrical. Pain, weakness, nerve trunk or muscle tenderness, paraesthesias, hyperesthesias are frequently found. These are followed by hypesthesias and patchy anesthetics; diminution and finally loss of deep tendon reflexes and muscle atrophy.

Central nervous system symptoms are seldom seen, since the cerebral vessels are infrequently involved. Convulsions, deafness, vertigo, aphasia, etc. may be seen. These are, however, usually transient. Terminally, many of the cerebral symptoms may be due to hypertensive encephalopathy and uremia.

The kidneys were involved in 72% of Mowrey's survey and showed chiefly infraction, aneurysm and glomerulonephritis. The signs may be hematuria, cylinduria, albuminuria, fixed specific gravity (around 1013), decreased PSP excretion and progressive azotemia and oliguria.

The heart and coronary arteries are also involved in more than 50% of cases, according to Boyd and Mowrey. Griffith and Vural frequently found thrombosis along the coronary arteries, ST and T changes, T-wave inversion and low voltage. Infarctions were infrequent. Anginal pains were infrequent. Congestive failure did not occur until very late in the disease, but was usually the most common cause of death. A sterile fibrinous pericarditis, with effusion, was also found at times. Usually the latter was also associated with a pleuritis and a pleural effusion.

Abdominal symptoms were frequent. Symptoms often mimicked acute surgical abdomens and many needless operations were done. The symptoms were usually crampy pain in the right upper quadrant or epigastrium associated with nausea, vomiting, diarrhea, constipation or melena.

Hepatic manifestations of periarteritis nodosa were found in from 42 to 65% of cases with hepatomegaly, spider-angiomata, lowered total protein, reversed A-G ratio, decreased BSP excretion and/or hyperbilirubinemia. Elevated alkaline phosphatase was also frequently seen.

Skin manifestations were varied and included subcutaneous nodules, purpura, petechiae, urticaria, dry gangrene of one or more extremities and gangrenous ulcers.

Periarteritis nodosa has been con-

fused with many diseases because of its protean clinical manifestations. Trichinosis, typhoid, cholecystitis, appendicitis, dysentery, meningitis, encephalitis tuberculosis, rheumatoid arthritis, acute nephritis and nephrosclerosis are only a few of the common ones.

Therapy Until the advent of steroids, no therapy for periarteritis nodosa was very successful. Atabrine and its related compounds have been tried with little success. Para-amino benzoic acid has been effective in one case reported by McGurl.

Because of their marked anti-allergic action in asthma and serum sickness, steroids were first tried in the late 40's. Dramatic improvement with a feeling of well being, a decreased sedimentation rate, a remission of the fever and, occasionally, of the leukocytosis was noted almost immediately after the administration of steroids. Hypertension, if present, was usually not affected, nor was the peripheral neuritis. Zeek has postulated that, since some cases of periarteritis nodosa have been reported following adrenal or pituitary hormone therapy, steroids may possibly be contra-indicated, especially in cases with severe hypertension and no history of allergy or hypersensitivity.

Rich found, in experimental periarteritis nodosa, that rabbits given cortisone during production of periarteritis nodosa by foreign serum therapy, showed the typical findings in only 2 out of 20 rabbits. Fifteen out of 20 of the control group of rabbits not given cortisone, showed the lesions of periarteritis nodosa.

Malkinson and Wells treated 37 patients having proven periarteritis nodosa with corticotrophin or cortisone. Only 3 were essentially well after 8 months,

and 14 were improved. The remainder of the group either continued status quo, deteriorated, or died.

Baggenstoss et al. treated two patients with pre-mortem diagnosed periarteritis nodosa. The patients showed remarkable clinical improvement, but eventually succumbed to intractable failure and electrolyte imbalance. On necropsy no active lesions of periarteritis nodosa were noted, but extensive fibrosis of the blood vessels with aneurysm formation or thrombosis were prevalent. Secondary fibrosis and atrophy of the organs with the compromised blood supply naturally followed. The disease was, in other words, inactive, but the damage to heart, kidney and other organs was so extensive that death occurred.

Cures, spontaneous or through therapy, for at least one year have been reported by many authors. However, these reports are hard to evaluate since some may have a spontaneous remission of their disease. Kampmeier and Shapiro followed one case of diffuse arteritis that had remissions and exacerbations for 21 years before death. In some cases periarteritis nodosa involved only the non-vital structures. Scarring and eventual fibrosis did not infringe on vital function too much. On the whole, clinical cure or recovery is extremely rare.

Specific treatment is with glucogenic steroids or corticotrophin. As much as 300 mg. of cortisone daily should be used initially. The dose then has to be enough to suppress the symptomatology, usually about 150 mg 80 to 200 units of corticotrophin can also be used with similar criteria for maintenance therapy. The hormones usually have to be used for about six months, or

until symptoms don't recur on a trail stoppage.

Summary

Periarteritis nodosa is a disease of connective tissue with protean clinical manifestations. It belongs to the same family as lupus erythematosus, rheumatoid arthritis, rheumatic fever, glomerulonephritis, scleroderma and dermatomyositis. Occasionally two or more of these diseases are found in the same patient and some investigations have found isolated pathological findings usually thought of as one of the diagnostic lesions in another disease, i.e., the LE phenomenon, glomerulonephritis, Aschoff bodies, perivascular cuffing and myositis.

Since Gruber first postulated the theory of a hypersensitive etiology, many other authors have found the same. The type of hypersensitivity has varied from drugs such as sulfonamide, thiouracil and penicillin, to foreign proteins of any sort. Nevertheless, there are also some cases that follow altered physiologic states such as endocrine therapy. Rich, however, even on the large percentage where no history of hypersensitivity could be found, postulated auto-immunization of the body to one of its own products. From this and other evidence, Klemperer concluded that all collagen diseases, including periarteritis nodosa, were a manifestation of hypersensitivity.

Zeek does not completely agree with Klemperer. She classifies periarteritis nodosa into two main types, allergic and non-allergic. The latter, she postulated, may have an unknown etiology (primary periarteritis nodosa) or a hypertensive etiology (secondary periarteritis

nodosa). It seems probable, however, that the majority of cases are due to hypersensitivity, but some cases, by strict criteria, cannot be thought to be due to allergy. The etiology of these is still obscure, but it seems fairly sure that all the collagen diseases have some interrelation. (It might be postulated, perhaps, that the different diseases are variations and manifestations of one disease process — my own opinion).

Clinical features are protean and seem to depend mainly on what organ system is primarily involved. There are some general symptoms that are, however, not specific, i.e., fever, leukocytosis, high sedimentation rate and tachycardia are almost always found. Albuminuria, hypertension, peripheral neuritis, abdominal pain and anemia are frequent findings. Then, too, the disease can run the gamut of all symptoms and involve all systems.

Treatment is not satisfactory, but steroids offer probably the best hope even though, in some instances, (i.e., patient with severe hypertension and no history of allergy or drug sensitivity) the steroids may be contraindicated. Steroids have a profound effect on the active inflammatory stages of the disease. However, the resulting fibrosis and secondary atrophy of vital organs due to decreased and spotty blood supply usually are too severe an insult to the body. If the disease could be recognized in its incipient stages perhaps the fibrosis, thrombosis, etc. could be prevented by steroids.

The course, as everything else in this disease, is variable, anywhere from one week to five years or more. Remissions are frequent, but cures are rare.

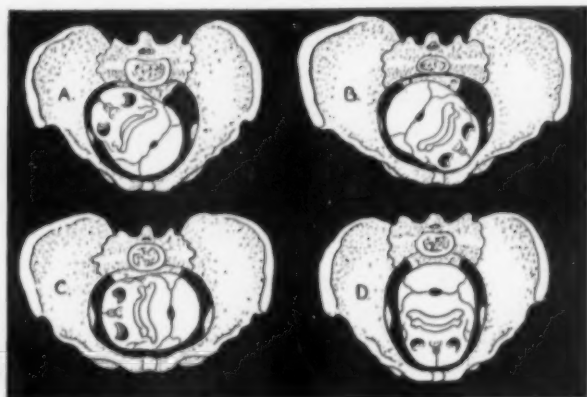
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PAN = Periarthritis Nodosa

Clini-Clipping

Adaptation of the fetal head to that diameter of the inlet most suited for its reception, A—Gynecoid type, B—Android type, C—Platypelloid type, D—Anthropoid type, (after McCormick)



Intrathecal Hydrocortisone and Amyotrophic Lateral Sclerosis

Case Report—Two and One-half Years Follow Up

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This report deals with the clinical results of treatment following subarachnoid administration of hydrocortisone in one patient with amyotrophic lateral sclerosis. Included are outpatient follow-up notes, examinations, and treatment over a period of two and one-half years.

Methods and Materials There was no standardized course or set plan for treatment. The therapeutic effective dose of hydrocortisone was unknown. Qualitative and quantitative studies on adrenal cortex functions were not possible. Placebo control studies did not seem indicated since the effectiveness of hydrocortisone and diet was being determined.

Reasons for selecting the subarachnoid space for the administration of

hydrocortisone are published elsewhere.¹

A patient volunteered as a subject. He was hospitalized to receive the initial course of treatments. Follow-up visits and treatments were on an "out-patient" basis. As "out-patient" and following each subarachnoid injection of hydrocortisone, the patient was instructed to return home and lie flat in bed without a pillow for at least 24-48 hours—while there were no untoward or adverse systemic reactions or personality changes during treatment, headache was the most common complaint. This, however, could be controlled by maintaining the recumbent position, with or without analgesics.

Hydrocortisone Acetate, (microcrystals in suspending agents): The hydrocortisone acetate used in this study can be obtained commercially in 5.0 ml. multiple dose bottles, having the following formula:

Hydrocortisone acetate	—125.0 mgm.
Saline	— 0.9 percent

1. J. Am. Ger. Soc., 1:794, 1953. Selection of the subarachnoid route for administration of hydrocortisone is based on the assumption that the central nervous system is contained in a closed space with selective filtration and high threshold levels for steroids at the choroid plexus or nerve tissue vascular barriers.

Polyoxyethylene sor-	
bitan monoleate	— 0.4 percent
Carboxymethylcel-	
lulose	— 0.5 percent
Benzyl alcohol	— 0.9 percent
Sterile distilled	
water q.s. ad.	—100 percent

A concentration of approximately 125.0 mgm. of hydrocortisone acetate per ml. was used to a greater extent. This can be prepared by carefully aspirating and removing 3.0 ml. of the supernatant liquid from each bottle after the crystals have settled out.

Hydrocortisone Free Alcohol(aqueous solution): The *solution* of hydrocortisone used in this study was prepared by the author. The solvent consists of small amounts of ethanol, glucose, and special gelatin for intravenous use.

Subarachnoid Administration of Hydrocortisone Acetate and Hydrocortisone Solution: With 1 or 2 percent novocaine as local anesthesia, the subarachnoid space was entered using a #18 or #19 gauge spinal needle. Following manometric readings and the obtaining of spinal fluid for laboratory examination, approximately 5-10 ml. of spinal fluid was aspirated and thoroughly mixed in the syringe containing the dose of hydrocortisone to be administered. The mixture was then injected slowly with aspiration to insure adequate dispersion of the steroid throughout the spinal fluid.

Diet: The following daily allowance of *unsalted fresh food* was rigidly enforced, since it appeared to control edema and had a beneficial effect on the clinical neurologic picture. One pound of fresh meat, boiled, broiled or roasted, gravy or soup discarded. One serving each of green, yellow or white vegetables; white vegetable consisted of

baked potato or boiled rice. Four slices of salt-free bread. Two boiled or poached eggs. Fruit for dessert. Fluids limited to 1000-1500 ml. per day consisting of water and citrus fruit juice. Dairy products were strictly forbidden. Dentifrices and laxatives were not permitted. Tap water enemas were allowed for constipation.

Multiple Vitamins: ("Theragran," Squibb). Each capsule contains:

Vitamin A	
(synthetic)	—23,000 U.S.P. units;
Vitamin D	— 1,000 U.S.P. units;
Thiamine	
mononitrate	— 10 milligrams;
Riboflavin	— 5 milligrams;
Niacinamide	— 150 milligrams;
Ascorbic acid	— 150 milligrams;

One capsule three times a day during and following hospitalization.

Oxytetracycline Hydrochloride: ("Terramycin," Chas. Pfizer & Co.)

Oral administration—one 250 milligram capsule every six hours during hospitalization.

Case Report

Patient (H.C.F.): 55 year old white man. Amyotrophic lateral sclerosis syndrome since 1939. Diagnosed in 1941 in Plainfield, N. J., and diagnosis confirmed at Neurologic Institute, N. Y., in 1942. Diagnostic aids consisted of spinal fluid examinations, air cephalogram, and oil myelogram.

History of sudden onset of left foot drop in 1939 followed by progressive weakness and wasting of the muscles of the left leg and gradual involvement of the right leg, buttocks, back and right arm. Progress of the disease had been slow with no significant remissions. Over the past year there has been a noticeable change with rapidly increasing

weakness and difficulty in getting about, although aided with a cane and a brace for left foot drop. Muscle twitching and spasms in legs and back have been noticed mainly at night. There is no history of cranial signs, sensory disturbances, bladder signs or girdle sensation. Review of the systems is essentially negative.

Findings—August 10, 1953: B.P. 130/50—Pulse, 72 and regular. Bilateral ankle edema. Walks with difficulty, unsteady with aid of cane tilting left pelvis upward and circumducts the left leg. Can rise to a sitting position from horizontal position only with much difficulty; cannot turn over on examining table. Cranial nerves intact. Fundi normal.

Upper extremities normal except for slight muscle weakness in right arm and hand. Coordination intact. Abdominal and cremasteric reflexes present but tire easily. Marked atrophy of all muscles of left leg and buttock with complete foot drop and negligible muscle strength. Slight atrophy of muscles of right leg with partial foot drop—strength 50-75% normal. Rigidity slight in both lower extremities with positive bilateral Babinski and ankle clonus. Vibratory and position sense intact. No visible fasciculations.

Laboratory Findings: The findings were not remarkable except for the following on admission to hospital. Spinal fluid protein, 37 mgm. %; colloidal gold, 1122200000; quantitative Kolmer, Negative. Total blood cholesterol 386 mgm. %. Cephalin flocculation, 1+ and 3+ in 24 and 48 hours.

Treatment as Out-patient: Prior to admission to hospital, from August 10th to November 6, 1953, the patient was studied while on the prescribed diet

alone, supplemented with vitamins. No other medication was given.

Findings on Admission to the Hospital—November 6, 1953 (after being on the prescribed diet for three months): The patient feels stronger and walks better. Ankle edema present on the left. No edema on right. No pathologic, neurologic findings in right lower extremity with slight improvement in muscle strength. No change in other findings noted in previous examination.

Treatment During Hospitalization: On November 6th, 8th and 10th, 1953, 32, 32 and 15 mgm. of hydrocortisone acetate were administered into the subarachnoid space of the lumbar region.

Findings on Discharge from the Hospital—November 14th, 1953: Walks without assistance and circumducts left leg. No tilting of pelvis. Can rise from squatting position with ease. Sits up and turns over in bed with ease—can raise buttocks off bed. Right upper extremity normal. Right lower extremity: strength 75% normal—no pathologic reflexes. Left lower extremity: can flex leg at knee. No clonus. Babinski: positive—slight increase in strength.

Follow-Up Observations and Treatment

November 17th, 1953: Three days prior to discharge from the hospital, the patient began to notice the onset of frequent, poorly formed and otherwise not remarkable stools, associated with perianal itching and burning—this was interpreted as allergic proctitis, secondary to Terramycin. Since discharge there has been progressive muscular weakness and bowel movements averaged 4-5 per day. Examination revealed loss of all pains in left lower extremity—muscle weakness predomi-

nated. No change in the neurologic picture in right arm, leg or back. The patient was instructed to take paragoric, one teaspoonful every four hours as necessary and potassium chloride grams 1.0 three times a day for two days.

Treatment: A spinal tap was performed and 62.5 mgm. of hydrocortisone was administered into the subarachnoid space (L_2L_3).

November 24th, 1953: Feels only slightly stronger—normal bowel movements. Gait unsteady with circumduction of left leg. Rises to a sitting position from the horizontal with difficulty. Upper extremities normal. Right lower extremity; can stand on heel—strength approximately 75% normal; transient ankle clonus—no Babinski. Left lower extremity; cannot stand on heel or flex leg at knee; persistent ankle clonus—no Babinski. Abdominals absent. Right cremasteric reflex present.

Treatment: Intrathecal administration of 62.5 mgm. of hydrocortisone acetate (L_2L_3) 20 min. following injection, patient could flex the left knee and sit up with ease. Gait almost steady.

December 3rd, 1953: Continuous headache from 11-26-53. Annoying but patient did not stop working or rest. Feels stronger. States he can flex left knee with brace on soon after arising in the A.M.

Examination: Gait slightly unsteady with circumduction of left leg. No change in neurologic findings.

Treatment: Intrathecal administration of 62.5 mgm. of hydrocortisone acetate (L_3L_4).

December 11th, 1953: Feels stronger. Stools poorly formed. Walks steadier. No ankle edema. No fatigue toward evening—can get along without cane about 50% of time.

Examination: Can raise left knee while in sitting position. Can stand upright from a sitting position without holding on to arms of chair. Can sit up and turn over on examining table with ease. Right lower extremity; no pathologic, neurologic findings—strength, 75-90% normal. Left lower extremity: can flex leg at knee slightly; ankle clonus easily exhausted; no Babinski. Left upper abdominal and right cremasteric reflex present.

Treatment: (1) Intrathecal administration of 62.5 mgm. of hydrocortisone acetate (L_4L_5).

December 18th, 1953: Normal firm stools. No headache. Low back pain which had been present constantly over past year and a half, gradually disappeared over past week. Strength and motor function improving. Can now walk up a flight of ten stairs, lifting knees and without holding banister rail.

Examination: Walks without cane lifting knees. Minimal circumduction. Ankle edema one plus bilaterally. Trace of ankle clonus on left and no Babinski. No ankle clonus or Babinski on right. Abdominal reflexes: slight contraction in four quadrants. Cremasteric reflex slight on left, brisk on right.

Treatment: (1) 42 mgm. of hydrocortisone acetate administered intrathecally (L_2L_3).

December 28th, 1953: Much more confident in walking. Does not use a cane. Slight headache and loose stools for three days last week following spinal procedure.

Examination: B.P. 130/50. Gait: no unsteadiness; walks lifting knees; minimal circumduction of left leg. Ankle edema one plus bilateral. No rigidity. No Babinski. Bilateral ankle clonus, mild but persistent on right. Abdominals and

cremasteric reflexes same as on previous examination.

Treatment: (1) 125 mgm. of hydrocortisone acetate administered intrathecally (L_3L_4).

January 4th, 1954: No headache. Felt better this past week than week before. Left leg feels stronger. Normal well-formed stools, past week.

Examination: Muscle strength: left lower extremity, 50-75% normal; trace of ankle clonus; no Babinski. No pathologic, neurologic reflexes on right. Muscle strength on right approximately 90% normal.

Treatment: Intrathecal administration of 62.5 mgm. of hydrocortisone acetate (L_1L_2).

March 26th, 1954: No change. Patient states he is "holding his own," with questionable beginning weakness in left lower extremity.

Examination: Findings are about the same as on previous examination, except for reappearance of slow sustained bilateral ankle clonus and a Babinski toe sign. Babinski was difficult to elicit on the right. Deep reflexes in the lower extremities were hyperactive. In the recumbent position, patient could partially dorsiflex the left foot. There was full dorsiflexion on the right.

Treatment: No spinal treatment this visit. Importance of avoidance of excess sodium-containing foods emphasized.

April 15th, 1954: Feels stronger. Does not fatigue easily. "Holding his own." No backache. Walks without cane. Left leg suggestively weaker, but can still raise left knee when walking up a stairway.

Examination: Gait: lifts left knee with minimal circumduction of foot. Sits up and turns over on the examining table with ease. No pathologic, neuro-

logic findings in both right upper and lower extremities. Left lower extremity: cannot flex left knee while in recumbent position; trace of rigidity; muscle strength approximately 75% normal; ankle clonus, trace; Babinski toe sign, difficult to elicit. Patellar reflex, hyperactive.

Treatment: Intrathecal administration of 40 mgm. of hydrocortisone (free alcohol) in aqueous solution (L_4L_5).

June 9th, 1954: No complaints. Continued improvement in muscle strength and gait.

Patient also states "improvement continues with each spinal."

Examination: Can stand on right heel, not left. However, in the recumbent position can partly dorsiflex the left foot, with noticeable strong pull of tendon of the great toe (seen for the first time). Can flex the left knee while in the recumbent position. Abdominal reflexes present. Cremasteric reflexes normal on right, sluggish on the left.

Treatment: Intrathecal administration of 75 mgm. of hydrocortisone (free alcohol) in aqueous solution (L_2L_4).

August 10, 1954: Experienced slight pain in low back over past week. Also felt "dizzy" one day lasting approximately one and one-half hours. Over the past 2 to 3 weeks, has noticed difficulty raising left knee when coming upstairs. Toe hits about one inch from top of each step. Less steady in walking.

Examination: Weight 158 pounds. B.P. 120/80; walks unassisted with slight unsteadiness. Minimal circumduction of left leg, strength approximately 100% normal in both upper and right lower extremities, 75% normal flexor strength in left lower extremity. No rigidity. Slow and easily exhausted ankle clonus on left, with positive Babinski.

Ankle clonus difficult to elicit on right, with no Babinski toe sign.

Treatment: Intrathecal administration 75 mgm. hydrocortisone (free alcohol) in aqueous solution (L_1L_6).

February 14th, 1955: Patient states he continues to improve and feels stronger. He also states he does not show fatigue at the end of the day. Over the past six months, there has been gradual return of sexual desire and performance, can now maintain erection during coitus.

Examination: Neurologic findings are approximately the same as on previous visit with the exception that clonus cannot be elicited in right lower extremity.

Treatment:

1. Subarachnoid injection of 75 mgm. hydrocortisone (free alcohol) in suspending agents (L_1L_2).
2. Acthar Gel (H.P.), Armour; 40 U.S.P. units deep subcutaneously.

February 27, 1956: Annoying daily frontal headache started 2 days after the last spinal treatment and lasted approximately 2 weeks during which patient continued to drive his car and work. Clinical picture has remained unchanged.

Patient states he is "no better or

no worse" and he "does not require a treatment." No sensory, bladder or bowel disturbance. No complaints. Volunteers information that he has had only one head cold in the past 3 years. It was mild and occurred 2 months ago, lasting for approximately one week.

Examination: Weight 170 pounds. B.P. 130/80—Walks lifting knees with only minimal circumduction. Stands on toes. Can only stand on right heel. No fasciculations. No change in atrophy. Strength intact in both uppers and right lower extremity. Flexor strength in left lower extremity approximately 60-75% normal. No rigidity. Rises to a sitting position from the horizontal with ease. Flexes both knees—left with difficulty. Can move toes and partially dorsiflex foot on left. No Hoffman, Babinski toe sign and trace of ankle clonus on left. No Babinski toe sign, but a trace of ankle clonus on right. Vibratory sense intact. Abdominals are present and brisk on the right. Right cremasteric present and brisk—left absent. No cranial nerve involvement. Fundi normal.

Treatment: None. Patient advised to remain on special diet and return in six months.

Discussion

The etiology or causative factor for amyotrophic lateral sclerosis remains to be determined. The use of hydrocortisone is directed not to the cause of the disease, but to the underlying pathologic process in the nervous system. It is reasoned that local tissue damage, regardless of the cause, is associated with metabolic and electrolyte changes, i.e. the normal utilization of carbohydrates, proteins, carbohydrates and sodium, potas-

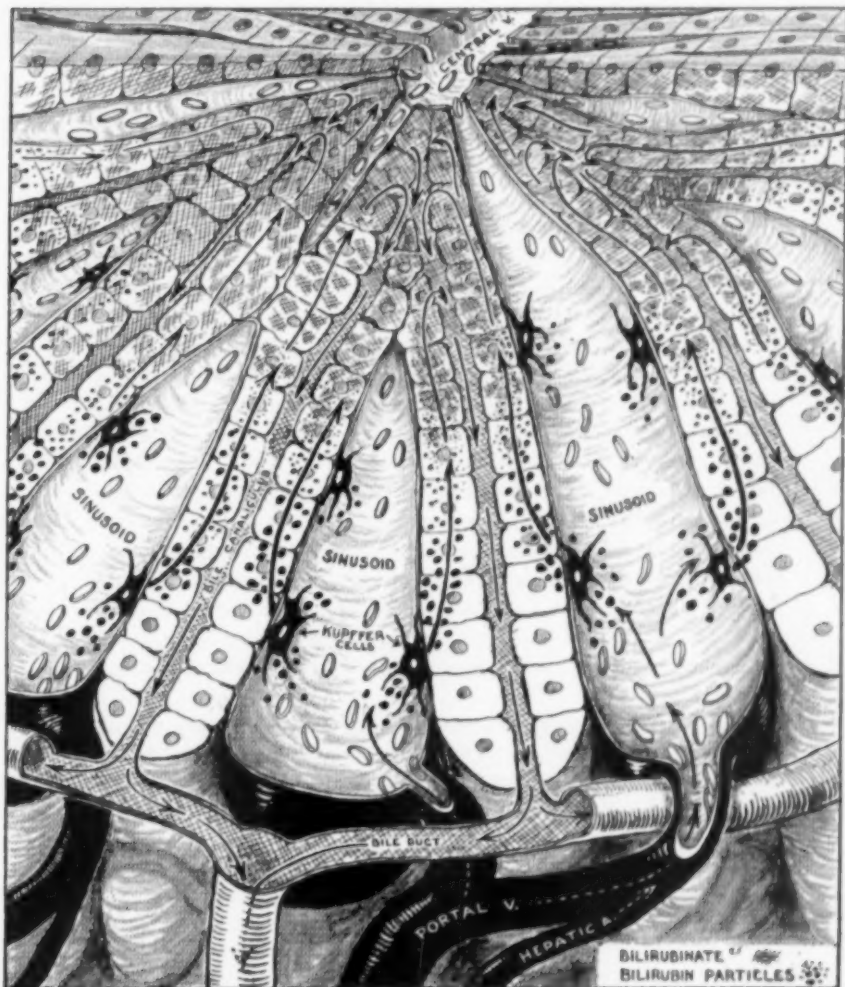
sium, etc. It is further reasoned that hydrocortisone functions at the cellular level by correcting the deranged metabolism and imbalance of the sodium and potassium ion ratio of damaged tissue. The special diet contributes to the function of hydrocortisone by supplying the increased demands for the nutrients necessary for repair of tissue damage, as well as supplying electrolytes as they exist in physiologic ratio.

Obviously this report concerns one patient. Though the results are encouraging they only merit mention. Much work has to be done using many patients and determining the time schedule for

injections, dose of hydrocortisone, as well as qualitative and quantitative determinations on the changes that occur in the target endocrine organs.

Scott Lane

Clini-Clipping



Schematic drawing showing radial structure of the polygonal liver cells around the central vein. Between the anastomosing cords of cells which surround the bile canaliculus lie the wide sinusoids which carry mixed blood from the hepatic artery and portal vein to the central vein.

Traction with Forceps in Instrument Deliveries

Traction should always be in the axis of the pelvis. A picture of the pelvic curve must be kept in mind. Force is applied in a plane perpendicular to the plane of the pelvis at which the head is stationed. As the head descends, the line of traction moves forward in a curved line following the curve of the sacrum. The pelvic curve of the classic forceps directs the handles in a plane obliquely anterior to the plane of the pelvis at which the head is stationed (Fig. 1).

To apply the force in the plane of least resistance—the axis of the pelvis—the axis-traction principle must be employed. One hand grasps the shanks and the other hand the handles. Force is exerted in two directions; downward with the hand on the shanks, and outward with the hand on the handles. This type of manual axis traction which closely resembles the Pajot-Saxtorph Maneuver (Fig. 2) is very difficult. The best results are obtained by some form of axis-traction attachment on the forceps, so arranged that traction is applied in a lower plane approaching that of the pelvic axis (Figs. 3, 4, 5).

Axis traction is most satisfactorily managed if the operator sits directly in front of the patient with his right foot extended backward to afford a brace against a sudden movement of the head or the forceps. If the instrument is without an axis-traction attachment, the handles rest in the upturned palm of the right hand with the fingers separated by the shanks, an arrangement that provides a lever action as the force is applied, and protects the fetal head from undue com-

From *FORCEPS DELIVERIES*, by Edward H. Dennen, M.D., Professor of Obstetrics and Gynecology, Director of Department and Attending Obstetrician, New York Polyclinic Medical School and Hospital. (Publisher—F. A. Davis Company, Philadelphia, Pa. \$6.50)

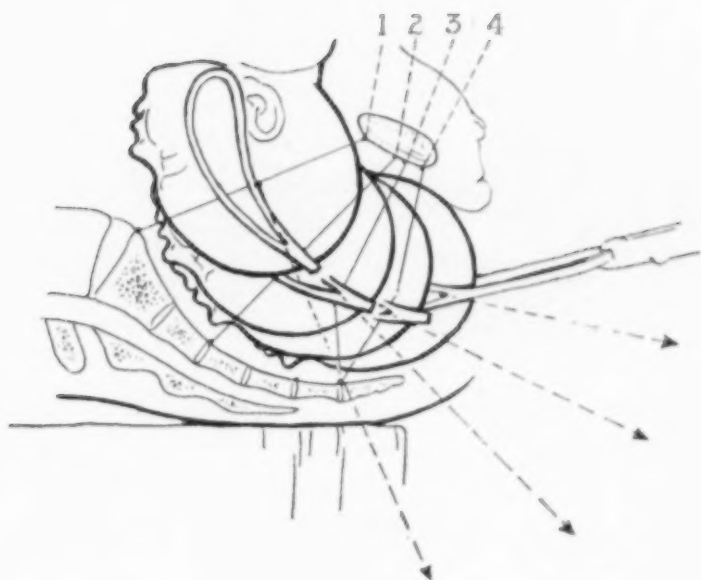


FIGURE 1



FIGURE 2

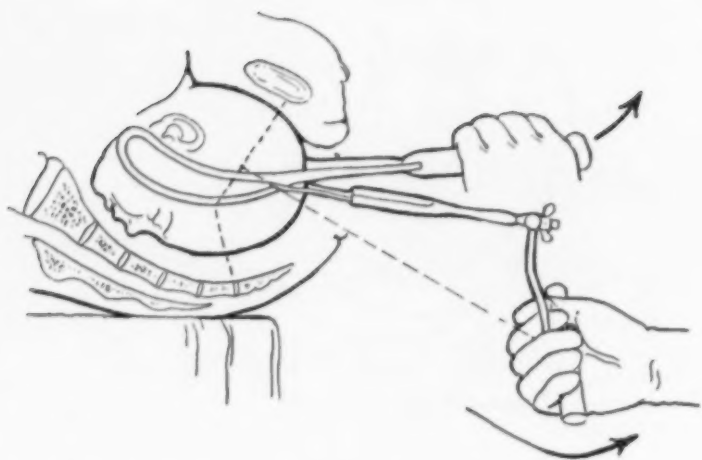


FIGURE 3

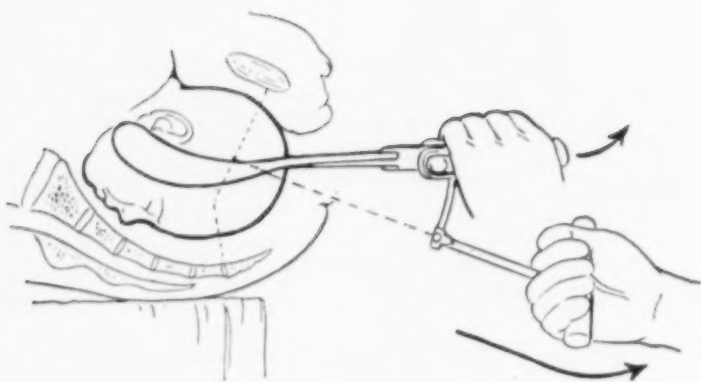


FIGURE 4

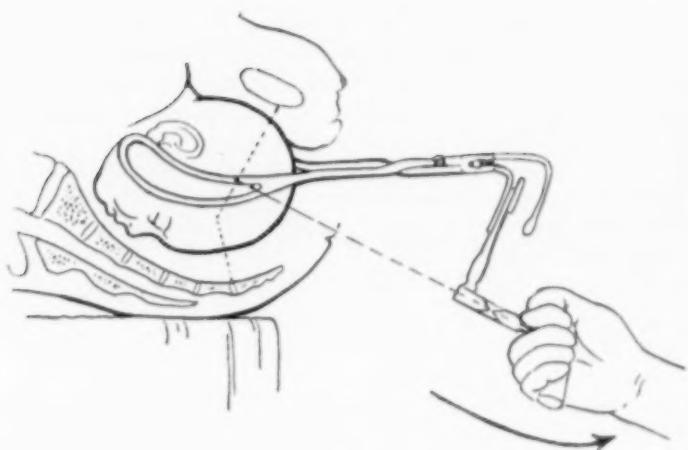


FIGURE 5

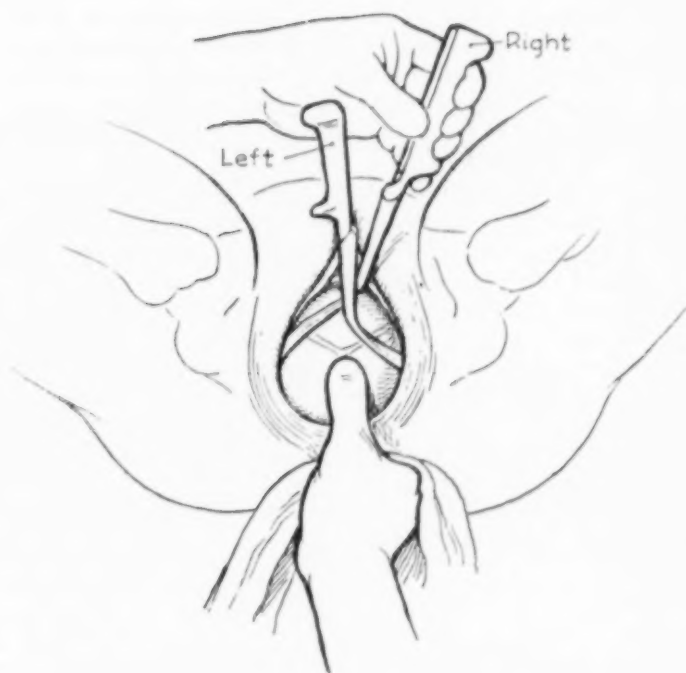


FIGURE 6

pression. The left hand grasps the shanks at the vulva from below. The combined forces of the two hands tend toward axis traction. As the head begins to distend the perineum, the direction of the pull is changed to follow a curved plane forward and upward. Recognition of the degree and cause of resistance increases by experience; if the direction of pull is changed too soon, resistance is met at the symphysis, if too, late, at the perineal floor.

To apply traction, the pull is begun and increased gradually and evenly sustained for an interval, and slowly relaxed (simulating labor). The pull is made from flexed forearms, with elbows held close to the body to guard against the consequences of any sudden movement. The possibility of fetal complications should not be overlooked.

If resistance is met at the outlet, the head is rotated according to the side of the occiput's original position until the obstruction is passed, after which it is returned to the O. A. position. When the posterior fontanelle has passed beyond the subpubic angle, the head is ready for extension. At this time an episiotomy may be done. In extension of the head over the perineum, the handles are elevated by the left hand, leaving the right hand free to perform the modified Ritgen Maneuver. When the handles have been elevated to about a forty-five degree angle, the fingers of the right hand, protected by a sterile towel, catch the chin through the perineum behind the anus to prevent the head from receding. The uncovered thumb is placed against the occiput to prevent a precipitous advance of the head during removal of the blades.

The procedure used in removing the forceps should exactly reverse their application. After unlocking, the right blade handle is carried over an arc toward the left groin and up to the symphysis with the left hand, the right hand being engaged in the Ritgen Maneuver. The blade emerges from the vagina across the occiput in a curved plane with the cephalic curve of the blade following the curve of the head (Fig. 6). Similarly, the left blade is removed toward the right side with the left hand. Should resistance be encountered in removing either blade, extreme care should be taken not to use force which might injure either mother or child. It may be advisable to deliver the head with one or both blades *in situ*.

The head is delivered by the modified Ritgen Maneuver, restitution is completed, and delivery proceeds.



Cancer and the Law

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Heart disease is the first, and cancer is the second cause of death in the United States. More than 500,000 new cases of cancer are being diagnosed in this country each year. Out of every hundred newborn 32 may be expected to develop this dread disease—3 by the age of 45, 14 by the age of 65, and 23 by the age of 75.¹

There is no one single cause of cancer. While the etiology of most cancers is still unknown, factors responsible for the development of some malignant tumors have been determined. Most of these involve chronic irritation of some type and are the subject of the two most frequently litigated cancer cases: occupational cancer and cancer allegedly caused by trauma.

Occupational Cancer An occupational tumor is one which arises from

contact with some exogenous agent, physical or chemical, brought about by some phase of the individual's regular work. Continued and prolonged contact leads to the proliferation of cells possessing the characteristics of cancer.

A telephone lineman repeatedly jammed his spurs, which were strapped to his legs, on telephone poles, which continually damaged the skin of his ankles. The irritation was prolonged over a period of years until it caused a cancer of the skin.² Here, in both the medical and legal opinion repeated mechanical trauma produced the tumor.

Constant irritation of the site of the tumor is essential to proof that the occupational hazard produced the cancer. Deceased operated a machine which turned out building blocks made of ashes, sand and cement. A concomitant

of this type of work was entrance of sand into the shoes and feet of workers. Deceased had a nevus on his foot which he claimed became irritated by the sand and subsequently cancerous.

The court held that there was no evidence that the nevus was irritated constantly by the sand before the cancerous development, especially since deceased had only worked in the sand for one month prior to his tumor formation.³

Certain agents such as aniline dye, tar, paraffin, pitch, actinic rays, and particularly coal tar and petroleum products are described to be carcinogenic. Serious responsibility is placed on the employer in industries involving these agents to employ protective measures to keep its workers safe. Courts have not limited the field to these medically known carcinogenic agents, but have held in other cases that other chemical agents that have never been known to be carcinogenic may cause cancer. Thus, the court found for the plaintiff in *Boal v. Electric Storage Battery Co.*, a 1938 Federal case.⁴ Boal had worked in the pickling industry for more than ten years; one of the hazards in his work was the inhalation of sulphuric acid mist. He first developed an ulcer on the underside of his tongue which later developed into cancer. The court found that the precautions taken by the defendant to prevent inhalation of the acid mist were not up to the standards of the industry, and that the development of cancer on Boal's lip was a result of the acid mist experience. Despite the fact that medically sulphuric acid has not been accused of producing industrial cancers, and despite the fact that no other incidents of cancer had arisen among workers the court had reached its decision. There was ample medical

testimony to the effect that the cancer had been caused because of the exposure to the mist.

In cases of alleged occupational cancer, where repeated trauma or prolonged irritation from industrial chemicals can be shown, the consensus of medical opinion will admit a legal cause for cancer, especially if the alleged cause is a known carcinogenic agent.

Thus, in these cases there are accepted medico-legal tests to prove or disprove causation:

- (a) Is the alleged agent known to be carcinogenic?
- (b) Have other workers in similar industries using similar agents developed cancers similar to claimant?
- (c) How long has claimant been exposed? Is this exposure period similar to other cases?
- (d) Is the site of the cancer the site of the exposure?

Trauma and Cancer The consensus of medical opinion is that a single blow cannot cause a cancer.⁵ Despite this overwhelming scientific opinion, courts have time and again held to the contrary. This presents a medical problem only because the issue arises so frequently in the courts. In *Canon Reliance Coal Co. et al v. Industrial Commission of Colorado*⁶, the court found that a mere blow to the cheek by a piece of coal caused death a year and a half later by cancer. Two physicians testified to the possibility that the blow to the cheek by a piece of coal caused death since the blow to the cheek was one of the possible causes of the malignant growth.

They admitted further that they did not know why cancer resulted in one such case and not in another. The court

found the evidence "substantial and credible."

A 1940 case⁸ upheld a Workmen's Compensation Board's decision that an electrical shock by the passage through claimant's body of an electrical current containing 2400 volts caused cancer to the liver and gall bladder and subsequent death. The medical experts stated contrary opinions. The court found it had to uphold the decision, despite the fact that "as laymen, we might experience difficulty in concluding the cancerous condition resulting in the death of Thomas Day was produced by the electrical shock he received."⁹

In *U. S. Casualty Co. v. Ind. Acc. Co.*,¹⁰ left breast of plaintiff was struck by a heavy box of batteries causing a "cracked rib" and injuring the soft tissues of the breast. Eight months later a cancer of the breast developed. The report of the plaintiff's doctor received in evidence, stated that the "trauma most probably instituted the formation and growth of the tumor." The same physician also testified that "single trauma" could be a "provoking cause" of breast cancer. And further he stated that there were numerous reports in medical literature showing a single trauma as responsible for a cancer. Verdict for the plaintiff was upheld on appeal.

In *Menard v. Phil. Trans. Co.*,¹¹ plaintiff was knocked down to the street by the sudden starting of defendant's street car. She received injuries to an ankle and knee and a discoloration of a breast which later disappeared. After a month a cancerous growth was noted in the same location as the area of the discoloration caused by the accident. The breast was later removed by a surgeon who testified for his patient and stated that there was "disparity" among medi-

cal authorities as to whether a single trauma can cause cancer. Her family physician testified that it was impossible to determine if another factor (other than trauma) also "contributed" to the cancer.

The trial judge instructed the jury that the defendant was liable if the injury was the *sole* or *substantial* contributory cause of the cancer. The jury found for the plaintiff in the sum of \$25,000. The appellate court held that the medical testimony of plaintiff's doctors sufficiently related the cancer of the breast to the injury and that the charge of the trial judge to the jury was correct.

In those cases where causation has been rejected, the absence of injury to the cancer site has been an important deciding factor. In *Smith v. White Pine Lumber Co.*,¹² the court held that a fall



fracturing a femur did not cause cancer in the prostate. Similarly, a fracture of tibia and fibula is not a cause of cancer in the liver.¹²

Minimal criteria have evolved from case law for establishing causal relationship between trauma and cancer:

- (a) Previous integrity of the wounded part;
- (b) proof of injury;
- (c) time interval elapsing;
- (d) site of injury, i.e., type of tumor must be reasonable and logical for location of trauma;
- (e) bridging signs — objective persistent signs, such as swelling, disfigurement, lack of healing.

While studies reveal that rarely will a single blow convert a pigmented mole into a malignant cancer,¹⁴ where the existing tumor is already malignant, medical opinion will then concede that aggravation of an existing cancer is probable.

A lump of coal struck an ulcer on a workman's lip, causing bleeding and then subsequent swelling. The ulcer had existed for several years, but it grew much more rapidly after the blow. The trauma had sufficient force to cause perceptible damage to the pre-existing tumor and compensation was granted to the injured man.¹⁵

In a 1950 Georgia case¹⁶ the jury's verdict was upheld which found that an injury received by the deceased to his leg tended to and aggravated the condition. Cancer had developed in the knee which was traumatized. This was held to be a *substantial* cause of deceased's death.

In *Hagy v. Allied Chemical & Dye Corp.*,¹⁷ plaintiff drove through a smog bank outside of defendant's plant. The smog consisted principally of sulphuric

acid vapor and sulphuric dioxide. Due to atmospheric conditions, the heavy smog was not carried away from the smoke stacks of defendant's plant and as a result, defendant's workers had to wear gas masks at the time. Plaintiff passed this plant while driving and lost consciousness because of the heavy smog. She received medical treatment. Within a few months it was discovered that she had laryngeal cancer and laryngectomy was carried out.

Plaintiff alleged in her suit that a dormant cancer had been "lighted up" because of exposure to the smog fumes. She was awarded \$25,000 by the jury since the court held that it was the jury's province to decide between conflicting medical evidence.

The physician thinks in terms of diseases following a certain clinical pattern. The cause or pathogenesis of disease to him resides in its inciting agent. The pneumococcus is the cause of pneumonia. In the case of cancer for the physician, in this sense there is as yet no known cause. He finds it difficult to admit the existence of any extraneous factor in the environment as a causative agent.

The lawyer's interests are outside the field of pathology. Cause in the lawyer sense is one factor in the process of adjustment toward social harmony. The lawyer wishes to shift the burden of harm from the injured to some other. The "other's" part in the occurrence of harm must be sufficient to make it appear that he ought to be liable.

The element of causation ascribed to the defendant doesn't have to be the *sole* cause or even its main cause, but a cause of sufficient proportion in the light of his relationship to the case to make it seem equitable for him to bear the cost.

This sufficient cause to lawyers is called the proximate cause.

The medical definition of cause and the legal definition of cause do not therefore coincide. The physician's concepts and views relating to trauma and cancer reside within the science of medicine. A lawsuit is an artistic thing; it has no semblance to accurate scientific reasoning. Medical opinions differ so much inside lawsuits because they are simply formal expressions by a so-called expert.

Greater understanding between the medical and legal professions is necessary in these spheres. Physicians must realize that lawyers are engaged in a partisan proceeding to achieve social harmony. Lawyers must realize that differing opinions of experts are products of this system.



Lung Cancer and Smoking There are at least two cases in court at this writing in which plaintiffs claim cigarette smoking either caused or aggravated a cancer of the lungs.¹⁸ Neither case has been concluded.

It is impossible to foretell the decision since medical opinion on the subject is sharply divided. Past legal precedents are not conclusive since almost every case in which plaintiffs claimed some exogenous agent caused or aggravated a cancer was decided by a jury on the basis of the facts of that particular case, and not by a judge as a matter of law.

Medical literature contains many reports linking heavy cigarette smoking with cancer of the lungs.¹⁹ Moreover, among the known carcinogenic chemicals which may occur in tobacco or tar, carcinogenic aromatic hydrocarbons and arsenicals have to be considered.^{19,20} Although specific aromatic hydrocarbons or "known" cancer producing agents have not been definitely traced to tobacco gases, still arsenic in tobacco gases has not been exonerated completely as one of the possible causes of lung cancer.²¹

Plaintiffs can cite the coincidence of the increase of cancer with the increase of cigarette sales. Case law, as far as it goes, is highly in favor of plaintiffs. Judges have emphasized time and again that unless the verdict is contrary to the weight of the evidence, these cases are within the province of the jury. Verdicts which have been contrary to best available medical evidence have been allowed to stand.²² Jury verdicts have been even more numerous against defendants in cases alleging aggravation of existing cancer.²³

One reason for these verdicts is probably the fact that the cause of many

cancers is unknown. A physician must testify that the alleged cause is a possible cause and the jury is permitted to translate this possible cause into the actual cause.

As the Supreme Court said in *Lavender v. Kurn*:

"It is no answer to say that the jury's verdict involved speculation and conjecture. Whenever facts are in dispute or the evidence is such that fair-minded men may draw different inferences, a measure of speculation and conjecture is required on the part of those whose duty it is to settle the dispute by choosing what seems to them to be the most reasonable inference. Only when there is complete absence of probative facts to support the conclusion reached does a reversible error appear."

If medicine does not know the cause for an act, the law may find one from the evidence other than medical:

"To meet the burden in the present case, it was proved that Smith had been in good health prior to the accident, and that injury resulted therefrom, making necessary immediate medical attention, which was continued regularly until the time of his death. No other intervening cause for the sudden breakdown appeared—a matter which is to be considered."²⁵

There is ample medical literature on the defendant's side, too.²⁶ Dr. William C. Hueper of the National Cancer Institute told public health organizers recently that the pattern of increase in lung cancer coincides not with the pattern of increased smoking, but more closely with the use of cancer-curing substances in industry and their appearance in engine-exhaust fumes; in other words, air pollution.²⁷

Statistics are not free from manipula-

tion. Defendants will point out, there is no proof, just supposition. To substantiate this, they will bring up the other possibilities besides tobacco smoke which may have been the cause of cancer.

Further, is defendant a guarantor that smoking is harmless? Are they liable to those persons who developed lung cancer before it was known that cigarette smoking was harmful? Are plaintiffs who continue smoking or begin smoking contributorily negligent in view of the publicity the subject has received?

Will there be injurious reliance because of the sense of false security through the use of filter-tip cigarettes? *Should cigarettes be labelled on the package as dangerous?*

Malpractice, Quackery and Cancer An elderly farmer with cancer of the lips went for treatment to Dr. Baldor, a disciple of the Koch method. The treatment consisted of shots of glyoxylide. Dr. Baldor resorted to none of the generally accepted methods of treating cancer, namely, x-ray, radium or surgery. After several months of unsuccessful treatment, Baldor stopped treatment and plaintiff turned to physicians who used the conventional approaches to the problem, which by this time were also unfruitful. A \$65,000 verdict for the plaintiff against Dr. Baldor was upheld by the Supreme Court of Florida.²⁸ However, the court specifically refused to label the Koch treatment as malpractice, despite the label of quackery given to it by the American Medical Association. The court believed itself unqualified to choose between differing medical treatments. Baldor's malpractice consisted in not attempting more conventional methods as soon as he discovered the Koch treatment was unsuccessful.

Other attempts have been made by medical associations to have courts label the Koch treatment as malpractice or quackery, but courts have refrained from doing this for various reasons. In the case of *Smith v. Dept. of Reg. & Education et al.*,²⁹ Dr. Smith allegedly cured a Mrs. Boehne of cancer by the Koch method. An attempt was made by a medical committee to revoke his license. Smith alleged that the committee was biased since all its members were also members of the A.M.A. which had labelled the Koch treatment as quackery.

Furthermore, the committee took no outside evidence on the efficacy of the Koch method but relied on its own knowledge. The court held a new committee should be formed which should hear outside evidence on the subject of the validity of the Koch treatment as good medical practice.

Cases have set up certain medical standards. Some criteria for establishing a diagnosis of cancer were determined by *U.S. v. Hoxey Cancer Clinic*,³⁰ namely, the importance of biopsy and pathological examination. In this case, which arose under the Federal Food, Drug and Cosmetics Act, the sale of a liquid as a cancer cure was enjoined. The advertisements that this liquid would cure cancer were false and misleading.

A similar case was *Koch v. FTC*.³¹ The Federal Trade Commission issued a cease and desist order against Koch

Laboratories for making false, misleading and deceptive statements about medicinal preparations that would allegedly cure cancer. There was no therapeutic value to the cancer cure. The court pointed out in its opinion that no biopsies were taken, no examinations were made and no effort was made to determine whether a prospective purchaser had cancer at all.

None of these cases, however, labelled the Koch or similar treatments as quackery or malpractice per se.

The question whether certain trauma caused cancer arises in malpractice cases also. In *Gluckstein v. Lipsett*,³² a possible cancer of scar tissue followed cosmetic surgery on plaintiff's breasts. The court held that defendant physician was guilty of malpractice and that plaintiff's resulting disfigurement was worth \$115,000 damages. Physicians testified only to the possibility that the nodules which developed on the breasts and which were not present prior to the operation might become cancerous. No tests were made to determine malignancy and the malignant growth was small. This, together with serious disfigurement and pain, resulted in the large verdict.

The court held that conflicting evidence as to whether the lumps in plaintiff's breasts were malignant growths resulting from plastic surgery was a question for the jury. This would determine the amount of damages to be awarded from the malpractice.

Summary

1. Occupational cancer and cancer allegedly caused by trauma are the most frequently litigated cancer cases.

2. An occupational tumor is one which arises from contact with some exogenous agent, physical or chemical, brought about by some

phase of the individual's regular work. Regular contact acts by the proliferation of cells with the clinical and laboratory characteristics of cancer.

3. Industries which use known carcinogenic chemical agents such as aniline dye, tar, paraffin, pitch, actinic rays, coal tar and petroleum products have a legal duty to employ protective measures to keep workers safe.

4. Certain tests must ordinarily be met to prove causation in an occupational cancer case:

- (a) Is the alleged agent known to be carcinogenic?
- (b) Have other workers in similar industries using similar agents developed cancer similar to claimant?
- (c) How long has claimant been exposed? Is this exposure period similar to other cases?
- (d) Is the site of the cancer the site of exposure?

5. In cases involving trauma there is much disparity in thought since the medical profession disbelieves that a single trauma can cause cancer.

There is abundant case law to uphold this theory. Certain minimal tests to prove causation can

be gleaned from the cases:

- (a) Previous integrity of the wounded part.
- (b) Proof of injury.
- (c) Time interval elapsing.
- (d) Site of injury i.e. type of tumor must be reasonable and logical for location of trauma.
- (e) Bridging signs—objective persistent signs, such as swelling — disfigurement — lack of healing.

6. Where aggravation of an existing cancer is involved both medical and legal thinking consider it probable for a dormant cancer to erupt from trauma, or advance the pace of an active cancer.

7. Medical and legal causation have been compared. The physician considers cause as the inciting agent. The lawyer's cause is proximate or relevant cause.

8. No legal case literature exists as to whether cigarette smoking is the cause of lung cancer since this is a relatively new legal problem. Medical opinion is widely divided on the subject. Case law on the aggravation of an existing cancer favors the legal decision that cigarette smoking causes cancer; a decision must be made by a jury on the facts in each particular case.

References

- 1. Blackwell, T. J., "Medical Malpractices in the Treatment of Cancer" *Ins. Law Journal* [1956] 472 J1 '56.
- 2. *Harris v. Southern Carbon Co.*, 162 So. 430 (La. App. 1935).
- 3. *Bollinger v. Niagara Supply Co.*, 122 N. J. L. 512, 6A, 2d 396 (1939).
- 4. 98 F. 2d 815 (3rd Cir.).
- 5. The following editorial appeared in 1944 in the *Journal of the American Medical Association*:
"In spite of the humanitarian intent of the declaration that a single accident injury can cause cancer, justice is not being done and the public is receiving a wrong impression in regard to the cause of cancer. Undoubtedly awards . . . were based on medical testimony,

but such testimony simply cannot be regarded as conclusive. Decisions that single accidental injuries have caused cancer or can cause cancer should be appealed to tribunals which will give the problems involved adequate competent attention in the light of present knowledge."

- Editorial, "Cancer as a Result of Accidental Injury", 125 J.A.M.A. 277 (1944).
- 6. 72 Colo. 477, 211 P. 868 (1922).
- 7. *Ibid.*, at p. 869.
- 8. *City of Owensboro v. Day et al.* 284 Ky. 644, 145 S.W. 2d, 856.
- 9. *Ibid.*, at p. 861.
- 10. 265 P. 2d 35; 122 Cal. App. Rep. 2d, 427 (1954).
- 11. 103 A. 2d 681; 376 Pa. 497 (1954).
- 12. 53 Idaho 608, 27 P. 2d. 965 (1933).

13. *Posen v. Indus. Commission*, 61 Ohio App. 530, 22 N.E. 2d 1014 (1939).

14. Moritz, *Pathology of Trauma*, Ch. 111, 1942. Ewing, *Modern Attitudes Towards Traumatic Cancer* 19 Arch. Path. 690 (1935).

Cf. *Louisville Ry. Co. v. Koob*, 190 Ky. 283, 227 S.W. 291 (1921) where a woman bruised her breast which contained a pre-existing tumor. Breast was removed because it was felt trauma might transform the benign tumor into a malignant variety. Surgeon's fear of malignant degeneration as a reasonable probable result of the trauma was shared by the court which upheld damages for the breast's removal.

15. *Sepesi v. Pittsburgh Coal Co.*, 114 Pa. Sup. 385, 174 A. 590 (1934).

16. *Atlantic Coast Line R.R. Co. v. Brown*, 62 S.E. 2d 736, 82 Ga. App. 889.

17. 265 P. 2d 86, 122 Cal. App. Rep. 2d 361 (1954).

18. In 1954 Ira C. Lowe filed suit in St. Louis against four leading cigarette manufacturers and a grocery chain, claiming damages worth \$25,000. *Time*, March 22, 1954, P. 50.

The second case is *Pritchard v. Liggett and Myers Tobacco Co.*, 134 F. S. 829 (Pa., 1955).

19. Numerous such articles are listed in

"Cancer of the Lung-Breach of Warranty in Cigarette Sales"? *Current Medicine* 1:35 S. '54, footnotes 1-13.

20. Hueper "Lung Cancer and the Tobacco Smoking Habit", *Industrial Med. & Surg.*, 23:13, Jan. 1954. *Internat. Med. Digest*, 64:5, May 1954, p. 267.

21. *Id.*

22. See cases above, pp. 4-7, where juries held that a single blow caused cancer.

23. *Hagy v. Allied Chemical and Dye Corp.*, discussed above, p. 7 is a prime example.

24. 327 U. S. 645, 653, 66 S. Ct. 740, 741 (1946).

25. *Smith v. Primrose Tapestry*, 131 A. 703, 704, 285 Pa. 145 (1926).

26. *Cur. Med.*, 1:16 N. '54.

27. *Time*, Nov. 26, 1956, p. 50.

28. *J. L. Rogers v. Dr. Julius F. Baldor and First Palma Ceia Hospital*, 81 So. 2d 658, 4 Negl. Cases 2d 120 (Sup. Ct. Fla., 1954).

29. 412 Ill. 332, 106 N.E. 2d 722 (1952).

30. 198 F. 2d 273 (5th Circ., 1952).

31. 206 F. 2d 311 (6th Circ., 1953).

32. 209 P. 2d 98, 93 Cal. App. 2d 391 (1949).

133 East 58th Street

"MEDICAL TEASERS"

A challenging crossword puzzle
for the physician
page 43a

Clinico-Pathological Conference

Henry Ford Hospital, Detroit, Michigan

Present Illness A 64-year-old Italian male factory worker was brought to the hospital against his wishes by a friend. The patient was aggressive, belligerent, and gave only a fragmentary history. He claimed he had enjoyed good health until about six months earlier when he had become aware of occasional nondescript epigastric distress attended by unusually loose stools varying from orange to white. For three months he had noted progressive swelling in his abdomen and ankles with itching in the lower legs. Within six weeks of his admission, his weight had dropped from 235 pounds to 193 pounds.

It was learned that the patient had subsisted on a diet made up principally of spaghetti and obviously deficient in protein for many years. Over a similar period it had been the patient's custom to imbibe a gallon of wine and one-half case of beer each day. However, during the month prior to entry he had almost abstained from food or fluid of any variety. He denied hematemesis and had not observed melena.

Physical Examination All vital signs were well within normal limits

including the blood pressure of 110/70. The sclerae were faintly icteric. Except for elevation and relative immobility of both hemidiaphragms, no remarkable signs were elicited in the chest. The abdomen was symmetrically distended, and shifting dullness was easily demonstrated. A firm liver edge was palpated with difficulty eight cm. below the right costal margin; the spleen could not be felt. Tortuous, distended superficial veins were seen in the skin overlying the abdomen but no telangiectases were found. Marked edema was seen from the feet to the buttocks and, to a lesser degree, in the hands. There were superficial linear tears in the skin of the legs.

Laboratory Data Urinalysis was unremarkable. The hemogram included an RBC of 4.05 million, hemoglobin of 12.9 Gm., and WBC of 8150. Macrocytic red cells were evident in a smear of peripheral blood. The differential count of leukocytes was within a normal range.

Bile was present in the feces. The concentration of serum bilirubin was 4.0 mg. per 100 ml. (2.0 mg. "direct"); serum alkaline phosphatase, 5.2 Bodansky units; serum albumin, 2.9 Gm., and

serum globulin, 2.6 Gm. The prothrombin time was 70 percent of normal.

The cephalin flocculation was four plus, thymol flocculation negative, and thymol turbidity, two units.

Aspirated ascitic fluid contained 1.44 Gm. of protein in 100 ml.; the specific gravity was 1.008.

Hospital Course Treatment included bed rest, high protein diet supplemented by the usual adjuncts, and mercurial diuretics; to none of these was there appreciable response. The patient gradually became more agitated, confused, and finally stuporous. One week after admission three liters of ascitic fluid were withdrawn; three weeks later six liters were removed. Six days following the second paracentesis, the patient lapsed into coma. Distinct fetor hepaticus was evident. Thereupon pulmonary edema supervened and, despite vigorous supportive therapy, the patient died on 42nd hospital day.

Dr. William S. Haubrich, associate physician, Division of Gastroenterology: If there is anyone in this audience who has read this protocol and believes the patient to have had other than cirrhosis, he is invited to make his claim now.

Audience: (no comment).

Dr. Haubrich: There is a remarkable background of nutritional deficit abetted by an almost phenomenal record of imbibition. A moment ago one of my colleagues suggested the man may have drowned. In any case, this patient's liver sustained a protracted insult to which its reaction must have been a marked fatty metamorphosis and subsequent advanced cirrhosis. My task is to decide whether there existed a disease in addition to, or rather than cirrhosis.

Intrahepatic Block Epigastric distress is fleetingly mentioned; I presume

no more detailed history of its characteristics was elicited. While cirrhosis is often painless, a sense of fullness or distress, if not pain, in the upper abdomen commonly reflects stretching of Glisson's capsule. The disturbance in bowel habit neither helps nor surprises me. The observation of white stools, which I take to have been inconstant, indicates an intermittent, at least partial obstruction somewhere along the biliary system. Such *intrahepatic* obstruction is compatible with cirrhosis.

Obviously, the man had ascites; indeed, he had anasarca. I will assume that the itching of the legs was due to stretching of the skin overlying the edematous extremities rather than to jaundice. It is disappointing that characteristic "spider" telangiectases were not seen; they commonly attend an advanced cirrhosis.

The relatively rapid loss of 40 pounds, in the face of mounting ascites and edema, is striking. Although the flesh of the advanced cirrhotic melts away (particularly noticeable in the extremities, shoulder girdle and chest), the fluid retention counter-balances, and there may be little change in gross weight.

Enlarged Liver From the physical findings we can reasonably exclude congestive cardiac failure by the absence of distended neck veins, rales, or any sign of heart disease. I may interject that often this differential diagnosis is not so simple, but that it may be promptly and easily resolved at the bedside by determining venous pressure. The liver was enlarged, and I will predict there was also splenomegaly which could have been demonstrated were it not for the ascites. The distended abdominal veins doubtlessly were part of a collateral

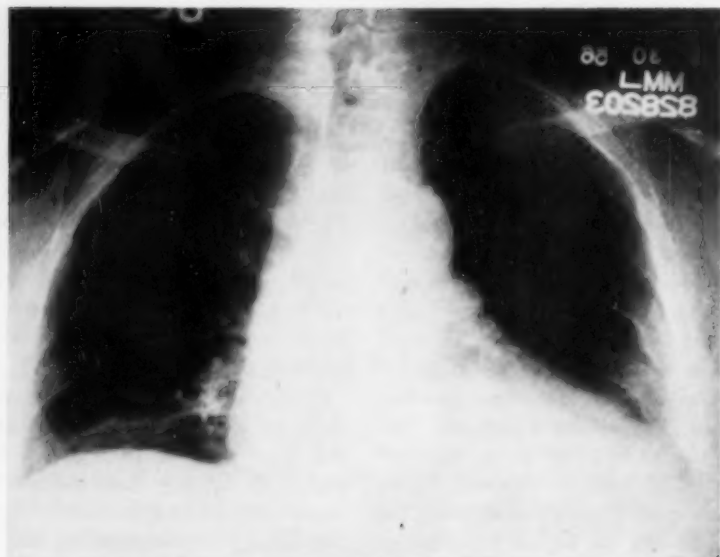


Fig. 1. Radiograph of the chest showing elevation of both hemidiaphragms and "blunting" of the costophrenic sulci.

channel circumventing a portal hypertension.

No mention is made of the texture of the skin, hair distribution, or the size of the testes. The skin was probably fine and smooth, rather of a feminine type; hirsutism may have been scanty; and the gonads may have been *hypotrophied*.

Macrocytic Cells From the laboratory we learn that the urinalysis and hemogram were essentially unremarkable, except for the macrocytic red blood cells. In this hospital, our hematologists are astonishingly adept at finding the macrocytes of liver disease. In fact, they occasionally suggest liver disease in a patient before we clinicians are aware of it. The hyperbilirubinemia confirms the observation of jaundice; the partitioning of the so-called "direct" and "indirect" fractions, in this case, would

not help me. The level of alkaline phosphatase activity is slightly elevated from the average normal range reported in our laboratory.

Serum Protein For the serum proteins, I would have preferred to find less albumin and more globulin. Elevation of serum globulin has been particularly constant in the cirrhotics we see. The depression of serum albumin in this case was insufficient to have been a major factor in the anasarca but doubtlessly made a contribution through its lessening of oncotic pressure.

The reaction among the several flocculation tests is inconsistent, but that is why we always ask for the battery rather than for one alone.

Although the apparent degree of bromsulfalein retention may have been exaggerated slightly by the hyperbilirubinemia, the figure of 46 percent



Fig. 2. In multiple x-ray exposures of the stomach, there is a consistent subtractive defect along the greater curvature in a polypoid configuration.

unmistakably indicates impaired liver function.

From its specific gravity, the fluid obtained by abdominal paracentesis was clearly a transudate as we would expect. We have learned that the protein concentration of ascitic fluid reflects, in general, the level of serum proteins. The usual concentration in cirrhosis is from 0.5 Gm. to 1.5 Gm. in 100 ml. In our patient the serum level was remarkably good; therefore, the protein content of the ascitic fluid was relatively high. Further, we know that this protein is not sequestered but is in dynamic equilibrium with the total protein of the body economy. If we estimate our patient contained 10 liters of ascitic fluid, this would include 144 Gm. of valuable

protein. Hence, we are reluctant to withdraw such fluid except for diagnostic necessity or mechanical relief of pressure.

At this point, I would like to see the available radiographs.

Dr. K. D. McGinnis, Department of Radiology: A radiograph of the chest (Fig. 1) confirms the physical findings of bilateral elevation in both hemidiaphragms. There may be slight pleural effusion evidenced by "blunting" of the costophrenic sulci. The lung fields are slightly denser than usual in the bases suggesting compression by the high diaphragm.

Dr. Haubrich: Would you say that the contour of the hemidiaphragms is smooth and regular?

Dr. McGinnis: Yes, I see no evidence of focal lesion in the liver below altering this contour. The only additional examination performed was that of the proximal gastro-intestinal tract. This study was performed at a disadvantage because of the patient's precarious condition.

No sign of varices was demonstrated in the distal esophagus. In multiple exposures of the stomach (Fig. 2) there is a consistent subtractive defect along the greater curvature in a polypoid configuration. Peristalsis is said to have traversed this segment without impairment.

Dr. Haubrich: I could have done very nicely without this radiographic demonstration; the case was unravelling smoothly to this point. Now we must decide the significance of the filling defect within the stomach. My own differential diagnosis could include: heterotopic pancreas, granuloma, so-called "tumor-simulating gastritis," gastric varices, old blood clots, and neoplasm, either benign or malignant.

It is unfortunate that, in this profoundly ill patient, further investigation was not feasible. However, we are reasonably safe in excluding the majority of possibilities which I have just named. It is my feeling that, in these radiographs, we are probably seeing a neoplasm. It has the appearance of benign adenomatous polyps, but I will confess that I cannot exclude a cancer.

The presence of this lesion within the stomach, of course, brings up the possibility of metastatic disease throughout the peritoneum and within the liver which conceivably could produce ascites, hepatomegaly, and weight loss such as exhibited by this patient. In order to help myself resolve the problem posed



by this possibility, I have constructed the scheme in Table I.

Alkaline Phosphatase I will not dwell on the importance of the history which is self-evident. The physical characteristics of the liver to palpation may be misleading, but usually in cirrhosis the liver edge, while firm, is regular, whereas with neoplasm large masses within an enlarged liver often can be felt. Congestive splenomegaly will be found with tumor only if the metastases fortuitously impinge on the splenic vein.

From the several "liver function tests," the alkaline phosphatase, cholesterol esters, and bromsulfalein retention have been the most helpful to me in this differential diagnosis. The alkaline phosphatase activity is not a sensitive sign of liver metastases, but, in the absence of jaundice, it is probably our most reliable index.

Was an aliquot of ascitic fluid from

Table I. A scheme for the differential diagnosis of ascites due to metastatic neoplasm in the liver and peritoneum and to cirrhosis.

	2° neoplasm	Cirrhosis
History	←	→
Physical Exam	liver  spleen 0	enlarged 
Serum proteins	@	alb ↓ glob ↑
Cholesterol esters	@	↓
Serum bilirubin	@	sl ↑
Alk. phosphatase	↑	sl ↑
Flocs	0	+++
BSP	sl ↑	↑
Cell blocks	+	0
Liver biopsy	←	→

this patient submitted for cell block study?

Dr. Robert Birk, chief resident: It was, and no remarkable sediment was obtained.

Dr. Haubrich: Finally, needle biopsy of the liver may remain our most helpful tool. Among unselected patients harboring metastatic cancer in the liver (not limited solely to "problem" cases), needle biopsy will provide histologic proof of the neoplasm in about four-fifths.

Applying the suggested scheme of differential diagnosis in our present case, the facts at hand clearly favor cirrhosis.

In summary, I am impelled to postulate a diagnosis of cirrhosis of the Laennec-type. Complicating this disease were ascites and edema, probably pleural effusion, and (although there was no sign of hemorrhage) varices are likely to have been present. There was congestive splenomegaly. There may also have been a portal vein thrombosis; if so, it would have been of the gradual, only partially obliterative type. In any case of cirrhosis, particularly that exhibiting a relatively rapid deterioration,

one must consider a supervening primary liver-cell carcinoma (the so-called "hepatoma"). I can neither establish nor exclude this last possibility on the basis of evidence at hand.

The stomach lesion could have been a cancer, and there could be metastases in the liver, but I am content with the diagnosis of cirrhosis alone.

Why did the patient die? One might better ask how he could have lived. The liver, despite its remarkable reserve and regenerative power, is a vital organ, and its functional depletion is incompatible with life. Further, the metabolic effects of advanced liver disease on the brain are well established and profound, though obscure. This is in the absence of any anatomically or histologically demonstrable change in the central nervous system. The pathologist will have also found pulmonary edema and a secondary pneumonia.

Dr. R. K. Nixon, Division of General Medicine: If this patient harbored cirrhosis alone, it is remarkable that the hemoglobin and erythrocyte count were so well maintained. We often find a

Fig. 3. Portal Cirrhosis

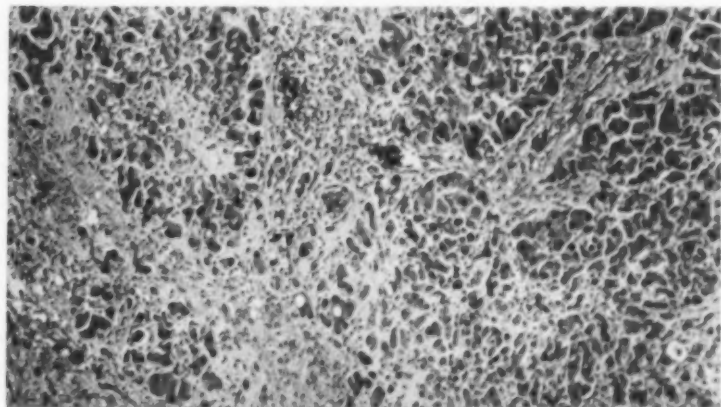




Fig. 4. Gastric Polyp

definite anemia attending long-standing cirrhosis. One wonders, too, whether there might have been a vascular obstruction on the more proximal side of the portal venous system, i.e., of a Chiari's type or within the hepatic vein itself.

Dr. Haubrich: If a venous obstruction were present, I would expect it in the afferent (portal) side rather than in the efferent (hepatic) drainage.

Dr. R. C. Horn, pathologist-in-chief: The autopsy findings are precisely as our discussant has predicted, although those who were actually responsible for this patient's care considered the diagnosis of gastric carcinoma with exten-

sive hepatic and peritoneal metastases much more seriously than did Dr. Haubrich.

The significant findings were limited to the abdomen. The peritoneal cavity contained 2500 cc. of ascitic fluid. The liver weighed 1700 grams and was diffusely finely nodular. On section, it offered greatly increased resistance to the knife. Varices were striking in the distal portion of the esophagus, but there was no evidence of rupture or hemorrhage. Multiple polyps were noted in the antrum of the stomach along the greater curvature. The mucous membrane was intact over all of them, and their bases were not indurated. The largest, 2 cm. in diameter at its tip, was pedunculated. The only other findings worthy of note were bronchopneumonia and pulmonary edema. Splenomegaly was minimal.

Microscopic examination showed the characteristic picture of Laennec's cirrhosis (*Fig. 3*) with heavy fibrous bands breaking up the parenchyma into pseudolobules. Bile duct proliferation and bile "lakes" were prominent.

Little evidence of regeneration was noted. The gastric polyps were all similar, having stalks covered by normal mucosa and tips composed of increased numbers of large irregular glands (*Fig. 4*). The appearance was much more suggestive of hyperplasia and inflammation than of neoplasia—as is usually the case with such polyps, in contrast to the much commoner ones of the colon and rectum. However, these gastric polyps are probably even more dangerous, so far as malignant potentialities are concerned. Both polyps and polypoid carcinomas of the stomach are practically invariably associated with advanced atrophic gastritis.

FINAL ANATOMICAL DIAGNOSIS: *Portal the stomach with atrophic gastritis; cirrhosis of the liver with ascites and bronchopneumonia and pulmonary esophageal varices; multiple polyps of edema.*

Have You Seen This Child?

Steven Craig Damman missing from East Meadow, New York, since October 31, 1955 will be five (5) years old on December 15, 1957. Believing the boy to be alive and that he may soon be enrolled in school for which he may be brought to a physician for vaccination, inoculation or physical examination in connection thereto, the cooperation of all practicing physicians is solicited. We are of the opinion that if any of the following characteristics are noted coupled with two or more of such of the physical peculiarities set forth, might very well serve as a good lead for further identification of this boy:

Physical Description

1. Sex—Male
2. Race—Caucasian
3. Age—DOB 12/15/52
4. Height—38 inches
5. Weight—32 pounds
6. Hair—Blonde
7. Eyes—Blue
8. Complexion—Fair
9. Defects—Large freckle on right calf, approximately $\frac{1}{4}$ inch in diameter; feet turned out—had difficulty in walking properly.
10. Blood—Father "A" Positive
Mother "O" Positive

Medical Description

1. May 6, 1953 examination revealed the lower pole of the right kidney to be palpable and was felt $1\frac{1}{2}$ to the right of the umbilicus.
2. January 30, 1954 X-ray revealed oblique fracture of left humerus demonstrated between the middle and distal thirds. Subsequent X-rays revealed good evidence of healing with no change in position.
3. May 18, 1953 treated for laceration of chin. Three sutures were required. Wound healed well.
4. September 9, 1955 examination revealed the right ear drum ruptured and purulent drainage issued.

The above information is based upon his age at the time of his disappearance.

If you have information regarding the above, please contact, wire collect, Stuyvesant A. Pinnell, Chief of Detectives, Police Department, County of Nassau, Mineola, New York.

Leg Ulcers

One of the most neglected problems in everyday practice is that of leg ulcers. Ulcers usually fall into the category of chronic diseases for which it is thought, erroneously, that little or nothing can be done.

Most leg ulcers occur in elderly people as a result of varicose veins or arteriosclerosis. Other causes are Mediterranean anemia, and syphilitic, tuberculous, and pyogenic infections. Ulcers may be associated with neoplasms such as Kaposi's sarcoma, mycosis fungoides, squamous cell carcinoma, and melanoma. They may occur as benign or malignant breakdown of old scars, and they sometimes occur in association with certain diseases such as ulcerative colitis and periarteritis nodosum.

Varicose Ulcers Without a doubt the most frequent cause of ulcers of the lower extremities is varicose veins, a familial disease in most cases. Thrombophlebitis of the femoral vein, which occurs as a complication of pregnancy, accounts for another large group of cases. This fact explains in part the higher incidence of ulcers in women than in men.

Trauma to the lower extremities (fracture, for example) will often cause permanent disturbance of the venous circulation, with ultimate frank venous insufficiency. But whatever may have been the cause of the venous insufficiency—heredity, phlebitis, or trauma—the pathology of the ulcer is the same.

First, edema fluid accumulates in the tissue—dependent edema, occurring on standing and subsiding with recumbency. Later, subcutaneous fibrosis develops and the edema persists even when the patient lies down. The skin is the first organ to show the manifestations of chronic venous insufficiency, long before edema and varicose veins become clinically evident. First there is pruritus, then a dermatitis (eczema) which may involve a local area or the entire extremity. After several years the entire leg has a brawny induration, and the skin is excessively pigmented. In this unhealthy situation an ulcer develops easily, either spontaneously or as the result of trauma, however slight. It occurs anywhere on the lower two-thirds of the leg, but most commonly just above the internal malleolus. Ulcers occurring in the upper part of the leg or thigh are, as a rule, not due to stasis. A single ulcer may gradually enlarge in size, or several small ulcers may coalesce to form a large denuded area. The forerunner of an ulcer is often a localized patch of eczema. Patients with venous insufficiency in the legs frequently develop localized phlebitis which may lead to further ulceration. The ulcers are painful, especially with standing.

Most varicose ulcers will heal if they

are properly treated. The most important measure is bed rest with elevation of the legs. The choice of medications varies according to the status of the ulcer. Wet dressings are always helpful. If the ulcer is infected, wet dressings with a solution of potassium permanganate (1:10,000) or of silver nitrate (1:1,000) are very beneficial. If the process is mainly inflammatory, compresses with solutions of boric acid (1:20) or of normal saline can be used. Local antibiotic ointments are of little value. There is nothing to replace wet compresses when the patient is on bed rest. If cellulitis is also present, as evidenced by local heat and redness, systemic antibiotics must be given. However, one must not confuse cellulitis with the inflammatory redness and edema which almost always surround a stasis ulcer.

The real problem in the treatment of ulcers is the prevention of recurrence. When the patient is ambulant, firm support by means of an elastic bandage or stocking is most important. The support is enhanced by placing a piece of sponge rubber over the ulcerated area before applying the elastic bandage. Locally, a bland paste or ointment (such as Lassar's paste) is advisable. Scarlet red ointment may have some beneficial effect in stimulating epithelialization. Gelfoam powder or red blood cells placed in the ulcer may be advantageous. Local therapy is of little importance, compared with firm support, which by itself will often bring about healing of the ulcer.

High-low saphenous vein ligation with stripping of the veins and the perforating branches should be carried out to facilitate healing and prevent recurrence.

If the ulcer is imbedded in dense fibrous tissue, healing will probably not take place on a conservative regimen. Excision with skin grafting is the treatment of choice in these complicated cases.

Ulcers Due to Arteriosclerosis Obliterans Arteriosclerosis obliterans is a disease occurring mainly in elderly individuals and may or may not be associated with generalized arteriosclerosis. It is definitely not always true that the state of the peripheral vessels mirrors that of the vessels of the internal organs. The disease is most common in males and in diabetics.

The lower extremities are usually not edematous. If edema is present, varicose veins are usually also part of the picture. The skin is cool to the touch and trophic changes such as shininess of the skin and dystrophic nails may be present. There is absence of pulsation of the dorsalis pedis, posterior tibial, and often the popliteal arteries. When the involved leg is raised, it blanches readily and when it is lowered, a much longer time than normal is required for the pink color to return. This is called the dependency test. Palpation of arterial pulsations and this test constitute the two quickest and most reliable guides to the status of the arteries of the lower extremities.

Ulcers which develop in arteriosclerosis obliterans are small and dry and are located chiefly on the feet or toes. When ulcers occur on the legs they usually are the result of trauma, either mechanical or thermal (for example a hot water bottle). These ulcers rarely heal spontaneously. The use of vasodilator drugs is not particularly beneficial. In selected patients lumbar sympathectomy is very helpful.

Arteriosclerosis obliterans.
Ulcers on toes and dorsum
of foot.



Stasis dermatitis of lower leg due to
varicose veins. Large ulcer in center
of involved area.



Arteriosclerosis obliterans. Local superficial gangrene of skin over heel and ankle due to burn by
hot water bottle. Ulcers will result from sloughing of eschars.

Ulcers Associated with Livedo Reticularis Livedo reticularis is a chronic familial condition involving the lower extremities and occasionally the upper extremities. Its simplest form, which is quite common, is known as cutis marmorata, and consists of mottling of the skin which is brought on by cold and relieved by heat. In some cases, however, the mottling persists as a bluish reticular pattern. This may be accompanied by pain and edema on standing. In areas of blue discoloration, multiple ulcerations may develop. These are small, painful, and often recurrent. The process is thought to be due to a functional arteriolar constriction. There is no involvement of the large arteries.

In most cases of livedo reticularis the only problem is the cosmetic appearance. In severe cases with ulceration, lumbar sympathectomy has proved helpful on occasion.

Ulcers Associated with Sickle Cell Anemia In young adults, especially males of Mediterranean ancestry, the presence of ulcers on the legs without any apparent vascular diathesis should immediately bring to mind the possibility of sickle cell anemia.

These ulcers, single or multiple, are frequently located on the shins. They are dry, clean, and without the edema that often accompanies varicose ulcers. The patient may have a generalized weakness and a yellow tinting of the skin. A hemoglobin determination and a search for the presence of sickle cells will quickly establish the diagnosis. The treatment is directed toward the correction of the anemia. Local measures are indicated for the ulcers.

Ulcers Associated with Specific Infections Syphilis must still be thought of as a cause of a unilateral

slow-growing, ulcerated area with a well-demarcated serpiginous border. Blood tests are positive. A biopsy will reveal a syphilitic gumma, with a large accumulation of plasma cells and endarteritis. The treatment is penicillin in full antiluetic dosage.

Tuberculosis can cause an erythematous induration of the legs. The Koch organism can be recovered in only about 5% of cases but the tuberculin reaction is strongly positive. Nodules are found in the calves and these may break down and ulcerate. A biopsy is diagnostic. The treatment consists of isoniazide and streptomycin, bed rest, and supportive measures.

Meleney's Ulcer Occasionally without any apparent cause, or following mild trauma, there develops on the leg an ulcer which progresses at an alarming rate, causing extensive destruction of cutaneous and subcutaneous tissue, exposing muscle and sometimes bone. The edges are undermined and irregular. The base may be clean or filled with a green purulent material. The cause is not known, but is thought to be a symbiotic effect of several organisms. An anaerobic microaerophilic streptococcus has been isolated from some of these wounds. This organism is very resistant to therapy and does not usually respond to antibiotics. Zinc peroxide paste dressings have been found to be of value.

Ulcers Associated with Neoplasms Certain conditions such as mycosis fungoides and Kaposi's hemorrhagic sarcoma may manifest themselves as ulcerated areas on the lower extremities. These lesions are often multiple and can be readily diagnosed by biopsy. Typical lesions of the disease can usually be found on other parts of the body.

Other neoplasms such as squamous cell carcinoma and melanoma have definite characteristics which facilitate their diagnosis. Again, biopsy is confirmatory.

Old scars will sometimes break down and ulcerate. This may be an indica-

tion of neoplastic degeneration. Examination of the lesion under the Wood's fluorescent lamp may reveal a vivid red fluorescence.

This fluorescence is observed in ulcerated squamous cell carcinoma but not in non-malignant ulcers.

Summary

By far the commonest cause of leg ulcers is varicose veins. In the older age group arteriosclerosis obliterans, and in the young adult of Mediterranean and negro ancestry, sickle cell anemia are causative factors worthy of consideration.

Specific infections and neoplastic processes such as mycosis fungoides, Kaposi's sarcoma, squamous cell carcinoma, and malignant melanoma, account for a small number of ulcers. Ulcers occurring in old scars may be due to neoplastic degeneration.

Clini-Clipping

SURGICAL INCISIONS

- A. Low Midline—good exposure—used in laparotomies and pelvic work.
- B. McBurney—for appendectomy.
- C. Right Rectus—for appendectomy, used on females as it provides for pelvic exploration.
- D. Pfannenstiel—for bladder work, gives good cosmetic result.
- E. Upper Midline—for exploration of upper abdomen.
- F. Upper Rectus—for gallbladder, spleen and kidney cases.
- G. Right or Left Costal—for rib work.
- H. Elliptical or Transverse—for umbilical hernia.
- I. Right or Left Inguinal hernia.
- J. Suprapubic—low midline for cystotomy or prostatectomy.



EDITORIALS

Hospital Bed Needs

A 4.2 general hospital beds per 1,000 ratio of persons which has recently been attained is considered to be nearing the standard requirement in the United States, according to the Health Information Foundation, reporting in its bulletin, *Progress in Health Services*.

General hospital facilities of 4.5 per 1,000 are considered a standard measure of need.

It is to be noted that the standard is exceeded in the so-called Mountain states (4.9) whereas in the East South Central states the ratio is low (3.2).

The Public Health Service expects hospital construction in the United States to cost \$775,000,000 during 1957 but does not consider this sufficient to meet actual hospital needs of the country.

The Bundle of His

The most famous of muscular structures, the bundle of His, connecting the auricles and ventricles, guarantees the heart's functional integrity.

The bundle guarantees also the fame of His.

Who was His, who enjoys such immortality, conferred by a mere band of muscle?

His (1831-1904) was born into a distinguished Swiss family and became a star pupil of Johannes Müller, Robert Remak, Virchow and Kölliker. He held professorships at Basel and Leipzig. His scientific field dealt with the origin of tissues—histogenesis. His wonderful models demonstrated morphological relations in three-dimensional space. As perhaps the greatest of embryologists, he worked out the problem of the dynamics of the maturation, fertilization, and segmentation of the ovum. Thus was derived the fascinating story of the chromosomes.

Most Important of Russian Surgeons

One of the greatest figures in the history of surgery is Nikolai Ivanovich Pirogoff (1810-1881). We associate his name with osteoplastic amputation

of the foot, with his treatise on military surgery and with his great atlas of 220 frozen sections. Ether anesthesia was introduced by Long of Georgia in 1842 and Pirogoff soon applied it. He was particularly noteworthy for the manual dexterity displayed in his work, which was suggestive of the incredible skill in execution of Slavic virtuosi of music.

Along with ether anesthesia Pirogoff introduced nursing of the wounded by women in the Crimea; this was a phase of his advocacy of freedom and higher education for women. For that matter, he was bitterly persecuted for his efforts to advance medical education in Russia at all points.

What Henry James said of another

great Russian, Turgenieff, may also be said of Pirogoff: "He was of the stuff of which glories are made."

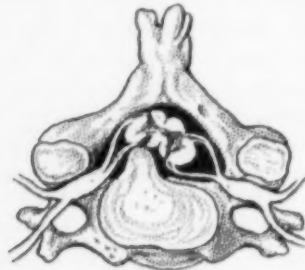
Nothing New Under the Sun

The transmission of yellow fever by mosquitoes was argued by J. C. Nott of South Carolina in 1848 and by D. Beauperthuy in 1854. Carlos Finley corroborated the fact in 1881. Sir Patrick Manson (1877) and Alphonse Laveran (1880) also established the role of the mosquito as a vector.

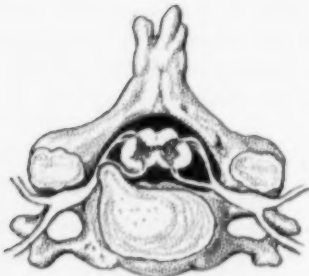
In this connection it is interesting to note that the theory that mosquitoes can transmit malarial fever was advanced in the sacred Sanskrit work of India, *Susruta*.

Clini-Clipping

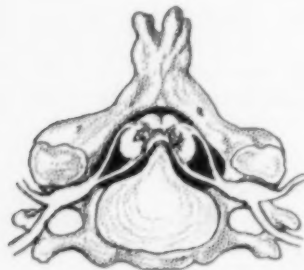
Effects of herniated inter-vertebral disc on spinal cord.



b. Protrusion at this point presses on both cord and root.



a. Protrusion at this point presses on root only.



c. Protrusion at this point presses on cord only.

Guest Editorial

PERRIN H. LONG, M.D.*

Brooklyn, New York

The Public and New Drug Information

We hear much comment currently from doctors relative to the rapid dissemination of new medical information to the public. Much of this comment is adverse. Indeed, doctors say that their patients who read the newspapers and certain magazines carefully, come to them with a knowledge of new drugs or new discoveries which have not yet appeared in medical journals.

Doctors often blame pharmaceutical companies for this situation.

What's going on in medicine today has a terrific appeal to the American public; and the journalists and publicists in medicine, appreciating this fact, do their best to provide the desired information.

The first major publicity campaign in medicine came with the development of the Georgia Warm Springs Foundation (later, the National Foundation for Infantile Paralysis) in the early 'thirties, with its March of Dimes.

Until the early 1940's, the National Foundation practically had the field to itself, but then came the transformation of the American Society for the Control of Cancer into the American Cancer

Society, the increase in activity of the American Heart Association, and the development of the Arthritis and Rheumatism, Multiple Sclerosis, Cerebral Palsy, Hemophilia and other foundations dealing with single diseases.

Each had to put its story vividly before the public in order to collect funds for the support of its activities. These events further stimulated the public appetite for medical information.

In the 'twenties, insulin, liver extract, parathyroid hormone, the toxoids, the early antipneumococcal sera, and certain vitamins were developed.

In the next ten years came specific antipneumococcal sera. Most of the vitamins were identified, the sulfa drugs made their appearance (amid terrific publicity—they were the original "wonder" or "miracle" drugs), the causative agents of influenza were identified, the first potent estrogens and androgens made their appearance, as well as certain of the adrenal hormones, and ex-

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cellent antimalarials were developed.

It was an exciting decade. It was followed by another; the 1940's, with the antibiotics ("miracle" drugs), the corticoids, even better antimalarials, the identification of Vitamin B12, the "atomic cocktail" and other astounding happenings.

We are now in the '50's. The new corticoids have been developed. New antibiotics have been discovered. The parasympatholytic and sympatholytic drugs have been increasing. Our ability to manage cancer, arthritis, etc., is growing. Salk vaccine prevents poliomyelitis (the biggest pay-off yet for a publicly supported foundation). New anti-hypertensive drugs are available, and finally the "tranquilizers" have caught the imagination of physicians and laity alike.

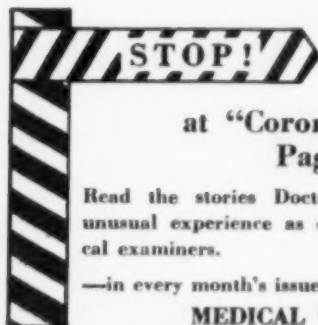
It is easy to understand, as one looks back, why all of these discoveries (and many more which we have not mentioned) have made the front page. They

have prevented, ameliorated, or cured disease. They have saved untold thousands of lives. *Why shouldn't they be front-page news?*

Doctors must realize that there is not a major medical or scientific meeting in this country today which is not covered by able science writers and the local reporter.

Science writers scan the pages of medical and scientific journals to pick up items which are not reported at meetings.

This is part of our contemporary scene with which, as you can see, pharmaceutical companies have essentially nothing to do. Therefore, doctors, don't rail at them or it. We have brought this situation on ourselves. It may at times make life a little more difficult for us, yet it has consistently made our relations with our public better. The American public supports American Medicine to the hilt. What more can we desire?



STOP!

at "Coroner's Corner"
Page 29a

Read the stories Doctors write of their
unusual experience as coroners and medi-
cal examiners.

—in every month's issue of
MEDICAL TIMES

GYNECOLOGY

HARVEY B. MATTHEWS, M.D., F.A.C.S.*

Hydrocortisone Vaginal Tablets in Vaginal Pruritus

G. Blinick (*Obstetrics and Gynecology*, 6:590, Dec. 1955) reports the use of hydrocortisone vaginal tablets of 10 mg. in the treatment of the severe itching in patients with monilial vulvovaginitis, senile vulvovaginitis, and trichomonal vaginitis. In monilial vulvovaginitis a fungicidal agent is also employed and in trichomonal vaginitis various trichomonocidal agents are used, while in senile vulvovaginitis estrogen creams are indicated. The hydrocortisone is not curative in any of these conditions, but relieves the itching promptly. In twenty-eight cases of monilial vulvovaginitis, the hydrocortisone tablet was inserted at the patient's initial office visit as soon as the diagnosis was established, and the patient was instructed to insert another hydrocortisone tablet the following morning and in the evening use a sodium bicarbonate solution as a douche and insert a fungicidal jelly. The hydrocortisone tablet was used for four days, and the fungicidal jelly through the menstrual cycle. In all cases there was marked relief of itching in two to three hours, and complete relief within twelve to twenty-four hours. Equally prompt relief was obtained in five cases of senile vulvovaginitis and in twelve cases of trichomonal vaginitis.

COMMENT

Vulva-vaginal itching is one of the most troublesome symptoms that the practitioner is called upon to treat. There are many causes—a few evident, many elusive. A very common cause is the monilial fungus—particularly in the pregnant; infestation with vaginal trichomonal and senile changes coincident with endocrine lag in older women. These are the easily diagnosed types but you will find many cases that defy diagnosis. The itch continues unabated but the cause has not been determined. There are many potent fungicides, trichomonocidal agents and estrogen relieving types but as the author says there is always a lag of several days between the beginning of therapy and the relief of itching. To close this gap hydrocortisone is recommended which may be given either orally or by vaginal suppository.

Relief of the itching is almost immediate. Wonderful! Seems almost too good to be true. We have had no personal experience with this therapy, but we can see no contraindications to its use, except during pregnancy. We do not know why ACTH or hydrocortisone, oftentimes causes fetal anomalies but since there is ample evidence that they do it certainly should not be used during pregnancy. Caution—always be sure your patient is not pregnant



Matthews

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before you begin treatment. Never forget—any woman in the childbearing age may be pregnant, married or unmarried. We have seen many cases of pregnancy in single females who were sent for "gynecological diagnosis" after much treatment for "sick stomach," headache and exhaustion, pruritis, etc., etc. We could never understand how any physician could "muff" an early pregnancy—even little girls (9-10-15) get pregnant. "Look and see" never fails to pay off.
H.B.M.

The Clinical Evaluation of 2-Acetylaminio-5 Nitrothiazole, an Orally Effective Trichomonacide

A. A. Plentl and associates (*American Journal of Obstetrics and Gynecology* 71:116, Jan. 1956) report that the use of the culture method of Hupferberg, Johnson and Sprince showed that 31.6 per cent of patients in a gynecological clinic and 20 per cent of pregnant women were infected with *Trichomonas vaginalis*. About 60 per cent of these women had moderate to severe vaginitis; the others showed no symptoms. A course of treatment with 2-acetylaminio-5 nitrothiazole, given by mouth in gelatin capsules in a dosage of 450 mg. per day, resulted in a "parasitologic cure" in 37 per cent of the patients treated, but 35 per cent showed undesirable side reactions. When the dosage was reduced to 300 mg. daily, and the drug was given in enteric coated tablets, the "parasitologic cure" rate was 35 per cent, and only about 5 per cent of the patients showed any side effects; none of these patients discontinued the drug because of the side effects. During treatment, 67 per cent of the patients showed symptomatic improvement. Hematologic studies with the higher dosages used (up to 600 mg. per day) showed no change in the hematocrit, red or white cell counts or plasma protein during and after treatment. These results show that this new trichomonacidal agent can

eradicate *Trichomonas vaginalis* by its "systemic action."

COMMENT

Trichomonad vaginitis is the most difficult infestation of the vagina to eliminate. There must be "a hundred" different methods of treatment which means that there is no specific trichomonicide. "Tenacity of purpose" is said to overcome all obstacles—well! the trichomonads have it. They usually manage to keep out of reach of all known methods of local treatment in sufficient numbers to reproduce themselves and so continue their "dirty work." These remarks thus far refer only to the female; but the male partner also may harbor trichomonads (usually do) and thus another source of re-infestation is always present. Don't forget the husband or the boyfriend when you begin to treat these cases. For many years clinicians have wished for a systemic drug that would eliminate the trichomonads from anywhere in the body. After many years of research we apparently now have such a drug — Tritheton (2-acetylaminio-5-nitrothiazole). Dr. Plentl and his associates of Columbia University Medical Center are very enthusiastic over their results with this oral preparation. This is "top" news for those hundreds of women who, though in spite of so-called good treatment for months or years, still have smelly, burning, itching, wet vaginas. Husbands, too, will enjoy "a clean reception." Study this article—you'll be well repaid.

H.B.M.

Hysterectomy: A Comparison of Methods Based on 2,008 Consecutive Cases

C. S. Hitchins and F. P. Paloucek (*American Journal of Obstetrics and Gynecology*, 70:1100, Nov. 1955) present a review of 2,008 hysterectomies performed in a fifteen years period, June 1, 1937 to Jan. 1, 1952. Three types of hysterectomy were done, total abdominal, supracervical abdominal, and vaginal hysterectomy. During the period reviewed there was a gradual increase in the number of total abdominal hysterectomies and a decrease in the number of supracervical abdominal operations. The number of vaginal hysterectomies remained about the same; this operation has been used in older women, chiefly in

the treatment of uterine prolapse. Malignancy was the indication for hysterectomy in 6.1 per cent, and unsuspected malignancy was found in an additional 2.2 per cent. The indications for hysterectomy have been much the same through the period studied; in women under thirty years of age, the chief indication was pelvic inflammatory disease and in women over thirty years, specific pathological conditions in the uterus, the most frequent of which were uterine myomas and chronic cervicitis. Total abdominal hysterectomy is now considered the method of choice for the congestion-fibrosis syndrome. The incidence of complications has been much reduced by the use of blood transfusion, antibiotics and chemotherapy. Before 1942 less than 15 per cent of the patients were given any form of chemotherapy; in 1948, 35 per cent were given chemotherapeutic or antibiotic drugs, and in 1950 and 1954, 94 and 95 per cent respectively were given such drugs. The length of the postoperative hospital stay has been gradually reduced in all types of hysterectomy since 1947, and averages at present "slightly less" than ten days. In the entire series of hysterectomies reported, there were eleven deaths, a mortality of 0.55 per cent.

COMMENT

Today total hysterectomy is the operation of choice. Sub-total hysterectomy should never be performed except in an emergency. It constitutes "unfinished" surgery which is not curative. Where any part of the uterine cervix is left behind (not removed) there remains nidus for chronic infection with its potentialities for the development of malignancy. Extirpation of the cervix therefore constitutes real prophylaxis against cervical and/or uterine cancer. Vaginal hysterectomy is growing in popularity and usefulness and rightly so because it's less "shocking" to the patient (the elderly particularly) and gets rid of the cervix. Perhaps the greatest deterrent to vaginal hysterectomy

has been the inability of the average operation to leave an ample postoperative vagina. A narrowed, short, painful, fibrous vagina is "terrible" on marital relations and we have re-operated quite a few cases—our own as well as others—in order to "reduce family friction" and thus help to restore happiness—marital happiness. Nothing is more important to many couples. Don't forget this—unless you can leave a physiological vagina (anatomically reconstructed), abdominal hysterectomy is "for you." "Practice makes perfect" is a good slogan to remember in re-construction surgery.
H.B.M.

Evaluation of 13,797 Routine Cervical Smears in a Cytology Center

W. S. Rogers and associates (*Obstetrics and Gynecology*, 6:487, Nov. 1955) report that in 13,797 initial cervical smears sent to a cytological center in one year, 1.2 per cent were found to be malignant, 1.5 per cent in the premalignant stage, and 0.3 per cent were considered "suspicious" of malignancy. In most of these cases, cervical cell scrapings by the Ayre method were used. The tests were made either as a part of a routine examination or because of some specific gynecologic finding or symptom. The fact that a "pre-cancer cell complex" can be demonstrated in such cervical cell scrapings is of definite value in prevention of cervical cancer.

COMMENT

During the past 50 years there have been many epoch-making scientific discoveries, particularly in the field of medicine. Just think them over! To the women of the world none has been more important than cytodiagnosis (cytology of body secretions). Here we have a diagnostic method that "spots" cancer at its truly earliest the "good old days," early diagnosis of cancer—especially pelvic cancer in women—often meant late diagnosis because we had no way incepton—when absolute cure is possible. In of even suspecting cancerous changes until symptoms appeared (cervix, uterus, ovaries, etc.) which all too often were late—too late. Therefore treatment usually failed and the patient succumbed to the ravages of metastatic

cancer. Smear cytology has changed this state of affairs—that is in those communities where cytodiagnosis is practiced. Local cancer is curable; metastatic cancer is not. Therefore the earlier the diagnosis the more certain the cure. What can be earlier than "cell diagnosis?" Tissue diagnosis is early diagnosis only in a relative sense since who can tell whether or not cancer *in situ* has not already metastasized. Furthermore, since the "pre-cancer cell complex" can be demonstrated, for example in cervix scrapings, it becomes a very important factor in the prevention of cervical cancer. "Prevention is always preferable to cure" as regards cancer since all treatment is uncertain. The next step in our fight against cancer is finding a specific cure (chemical, vaccine, etc.) But this is unlikely because we do not know the cause of cancer. In the past, we have had to know the cause of a given disease before a "specific cure" could be discovered. Your commentator feels very definitely that cytodiagnosis is going to change the whole picture of pelvic cancer from one of hopelessness and defeat to one of success and thankfulness. What a boon to womankind! Every physician must become familiar with cytodiagnosis. How can smear cytology be made available to every physician everywhere? Well, many diagnostic techniques are routine today that were impossible to obtain "a few years back." Cytodiagnosis likewise can become a routine procedure, particularly on all female patients—and it must. It's up to the doctor in any given community. Newspapers and lay journals have already publicized this information and the average modern woman "reads and talks and listens and talks and talks." These women of your community will not be long in demanding this service. Organized medicine must "jump the gun" and begin right now to see that every hospital and pathological laboratory provides cytodiagnosis—accurate, dependable, honest service at a reasonable fee. In Dade County Florida organized medicine is leading the way in solving this problem. Every community may well emulate the Dade County plan. Remember—how you doctors despise compulsion—especially from the government. Don't forget also, that what the medical profession will not do for themselves, "Uncle Sam" will gladly do for them—at a price. Get Busy!!

H.B.M.

Detection of Cancer in the Cervix Uteri: Use of New Method of Cell Collection

H. E. Nieburgs (*Obstetrics and Gynecology*, 7:10, Jan. 1956) describes a new method of cell collection for the detection of cancer of the cervix uteri.

The device used is a menstrual tampon modified by the replacement of the upper cone of cotton by a piece of nylon-sponge with a string attached inserted into a cardboard tube. The lower cotton cone of the tampon is retained. The tampon is introduced into the vagina in the same way as a regular menstrual tampon; two strings, one attached to the nylon, and the other to the cotton part, protruding from the vagina, are used to remove the cotton and the nylon sponge. The nylon sponge is inserted into a small cardboard box with two glass slides, one at the top and one at the bottom; then the box is closed, and the sponge is pulled out of the open end of the box, thus automatically making two smears. This tampon has been used in thirty patients with lesions of the cervix, the nature of which was known, including both invasive carcinoma *in situ*. In thirteen of these patients the nylon sponge was removed and the smears made after four hours; in the other fifteen patients after twenty-four hours. In twenty cases additional smears were obtained with the use of a cotton applicator. In the fifteen cases in which the sponge was removed in four hours, the diagnosis of carcinoma *in situ* was made in eight cases, invasive cancer in three cases and borderline changes in four cases. In this group two endocervical smears with the cotton applicator gave false negatives. In the fifteen patients in which the sponge was removed in twenty-four hours, the diagnosis of carcinoma *in situ* was made in ten cases, invasive carcinoma in two cases, and borderline changes in two cases; in one case the smears were negative for cancer. Where both the sponge smear and the endocervical smear were positive the number of can-

cer cells was larger in many cases in the sponge smears than in the endocervical smears. The author suggests that with the use of this tampon, "the entire female population" may be examined for cervical carcinoma and examination may be repeated at yearly intervals to prevent the occurrence of invasive cervical cancer.

COMMENT

Since Dr. Papanicolaou first introduced his method of identifying cancer cells in smears made from vaginal secretions many improvements in collection, preparation, transportation and examination of cytological smears have been proposed. Today any physician or nurse may take and prepare excellent slides for cytodiagnosis. Furthermore these slides (smears) can be transported to distant competent laboratories with complete satisfaction. No longer can the physician neglect this most important diagnostic procedure because he has no access to a competent laboratory—he has, U. S. Mail or Air Express is always available. Dr. Nieburgs has offered still other methods of collecting cervical cells for cystodiagnosis. It seems to work and is easy to manufacture—"on the spot." We agree that this method could be used to survey the "entire female population" for cervical carcinoma and, repeated once a year, could all but eliminate cancer of the cervix. Stop!! Just think how many women (mothers, wives, daughters) could be saved from the horrible ravages and suffering due to pelvic cancer by such a crusade.

H.B.M.

Pelvic Plastic Repair — Indications and Results

J. M. Wilson (*American Journal of Obstetrics and Gynecology*, 70:1219, Dec. 1955) reports that pelvic plastic repair was done on sixty-nine patients with pelvic relaxations in a period of seven years. In this same period sixty-two women with similar lesions were studied, but were not operated on. The pelvic relaxations were of lesser degree in the cases in which operation was not done; only 9 of these cases patients showed procidentia, while twenty in the operated group showed procidentia; in

the non-operated group there was uncomplicated first degree prolapse in thirty-two cases, and in the operated group only eight showed uncomplicated first degree prolapse. Of the sixty-nine patients operated on, sixty-six complained chiefly of pressure; the other three also had some pressure symptoms, but the chief symptom in two of these cases was excessive bleeding, and in one, urinary stress incontinence. Of the sixty-six patients not operated on, thirty-four were seen for routine physical examination; thirty-three of these complained of some pressure symptoms and five of back pain; in fifteen of the thirty-three patients with pressure symptoms were relieved "more or less satisfactorily" by the use of pessaries. In the patients operated on, vaginal hysterectomy was done in fifty-nine cases, colpocleisis in eight cases, colpocleisis with excision of cervical stump and the Manchester operation in one case each. There were no deaths. The most frequent complication was urinary tract infection which was mild in forty-six cases, moderate in three cases, and severe in only one case; there were two cases of postoperative hemorrhage, and one postoperative hematoma, all easily controlled. Technical failures of the operation were noted (all within three months after operation) as follows: Total failure of the operation in one case, recurrent symptomatic cystocele, two cases, continued pressure, although anatomically normal, one case; urinary stress incontinence not improved in five cases (out of twenty-two), recurrent posterior vaginal hernia in two cases (out of six cases). The two recurrent vaginal hernias were later successfully repaired, all but one of the patients with persistent urinary stress incontin-

ence were satisfied with the results of the operation; and one of the patients with recurrent cystocele stated that she "felt better" after the operation. Fifty-nine patients followed up for a year or more (twenty of them for five years or more) showed good results.

COMMENT

The results following pelvic plastic repair should be uniformly good, provided the operator is thoroughly familiar with the anatomy and physiology involved and the technic of the operation employed. There are many technics. One should choose a method and become "an expert" in its execution. Again "practice makes perfect" and particularly in this type of plastic surgery. Of course not all cases of procidentia need operations—particularly during the childbearing age. We have used the pessary in this latter group with considerable success over the years. We have often thought that this type of treatment was fast becoming a "lost art" in the younger

group of gynecologists. The dynamics of the pessary are sound but it requires a great deal of patience and skill to obtain the best results. In the older group (45-50 and older) with characteristic symptoms we employ the Manchester operation or some modification thereof. We always amputate the cervix (high) in any operation for the "cure" of procidentia where the entire uterus is not removed. This procedure eliminates the possibility of the future development of malignancy of the cervix and furthermore materially aids in the success of the operation generally. In certain cases, we believe vaginal hysterectomy with complete vaginal plastic repair gives the best results. In the elderly, where marital relations need not be considered, complete closure of the vagina gives excellent results. To us there is no more fascinating field in gynecology than that of pelvic plastic repair. We must however warn the younger men—the inexperienced operator should not attempt these operations for failure is almost sure to occur thus creating the ill will of the patient and bringing discredit to the ability of the operator. Plastic surgeons are not created overnight; years of training are required.

H.B.M.

OBSTETRICS

HARVEY B. MATTHEWS, M.D., F.A.C.S.*

Postpartum Hemorrhage Due to a Depletion of Fibrinogen from the Circulating Blood Stream

M. Klein and associates (*American Journal of Obstetrics and Gynecology*, 71:51, Jan. 1956) state that the importance of a depletion of fibrinogen in the blood as a cause of postpartum hemorrhage has been recognized only in recent years. The possibility of "impending" hypofibrinogenemia in an antepartum patient should be considered in cases of intrauterine death of the fetus, pre-eclampsia, unusual bleeding from the mucous membranes, the presence of ecchymoses. Repeated de-

terminations of the level of plasma fibrinogen should be made in such cases. Two other simple and practical methods of examination are also of value. In the uncitrated venous blood in a test tube, the normal clot is large and resists shaking. If fibrinogen is depleted or there is an excess of fibrinolytic substance present, the clot is small,

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may fragment or lyse rapidly. Another laboratory test is to add 9.9 ml. of venous blood to 0.1 ml. of bovine thrombin, to determine the amount of fibrinogen depletion. In cases where fibrinogen is depleted, but there is no excessive fibrinolytic substance in the blood, the administration of 4 gm. of human fibrinogen intravenously with fresh whole blood as replacement therapy, is effective in treatment. In cases where this treatment fails, the failure is to be attributed to any excess of fibrinolytic enzyme in the body which is best treated by the intravenous administration of toluidine blue in addition to the fibrinogen and replacement therapy. Before 1954 no case of hypofibrinogenemia was observed at the Mt. Sinai Hospital of Cleveland, Ohio; in 1954 three cases were found in 3,059 deliveries. In the first case, the condition was not correctly diagnosed until the patient was being prepared for operation when fibrinogen was given but death occurred in about two weeks, possibly due to kidney damage. In the second case, the depletion of fibrinogen was due to excess of fibrinolytic substance in the blood, and the administration of fibrinogen did not cause the blood to clot. In the third case, the diagnosis was made promptly after the patient had aborted a macerated fetus, and the administration of fibrinogen (4 gm.) resulted in prompt cessation of bleeding and "uneventful" recovery.

COMMENT

The importance of the depletion of fibrinogen in the blood stream as a cause of hemorrhage is now well established. We think hypofibrinogen is the preferable designation. Etymologically, afibrinogenemia means complete absence of fibrinogen below a certain level, robs the blood of its ability to clot and hence hemorrhage occurs. In obstetrics there are many predisposing factors and one must be cognizant

of these possibilities. Every prenatal mother should have a complete blood count routinely before the onset of labor, including fibrinogen determinations. If by chance this has not been done the obstetrician can check the clotting time of a specimen of blood in a test tube and, if indicated, fibrinogen tests can proceed without dispatch. Your commentator believes this determination to be one of the important advances in obstetrics in the last 100 years. Hemorrhage! that most dreadful complication of childbirth is always lurking around the corner. Our dealings with postpartum hemorrhage has been the most harrowing in our entire obstetrical practice, particularly during the early years. What success we have had in the management of these cases we believe has been due to the early recognition of its causes and prompt active treatment. Packing the uterine cavity will not stop severe postpartum hemorrhage. Hysterectomy will. Now, we are not saying perform a hysterectomy in every case of severe hemorrhage—far from it. But we are saying that after you have tried the usual procedures for stopping the hemorrhage without success, do not procrastinate further. Your patient will soon be beyond successful help. These are truly desperate cases that require sound judgment and active treatment. Hemorrhage and shock are like a forest fire—rampant, rapidly destructive, requiring vigorous action to check. Remember, as always, in the practice of medicine and surgery, "without a diagnosis there can be no intelligent treatment."

H.B.M.

Hodgkin's Disease and Pregnancy

T. J. M. Myles (*Journal of Obstetrics and Gynaecology of the British Empire*, 62:834, Dec. 1955) reports a case of pregnancy in a woman with Hodgkin's disease and reviews the literature on the subject. This review shows that, including the case reported, there have been 218 pregnancies in 166 women with Hodgkin's disease; five maternal deaths have occurred at term in 155 cases; delivery was premature in seventeen cases (including the author's case, cesarean section at thirty-six weeks); spontaneous abortion occurred in seventeen cases, and abortion was performed in twenty-three cases. No definite proof was found that the health of the infant is adversely affected by Hodgkin's

disease in the mother; in the author's case the baby was normal at birth and "made good progress." The author considers that the treatment of choice of Hodgkin's disease in a pregnant woman is deep x-ray therapy "with adequate shielding of the foetus" when necessary. Abortion is not indicated in Hodgkin's disease, unless adequate radiotherapy cannot be given without injuring the fetus, or deep x-ray therapy has been given in the abdominal region very early in pregnancy before the pregnancy was recognized.

COMMENT

In 45 years of a fairly active obstetric practice around metropolitan New York City, your commentator encountered only two (2) cases of Hodgkin's disease and pregnancy—one (1) private and one (1) clinic case. The private case (age 26) went through her pregnancy without specific therapy directed towards the Hodgkin's disease and delivered a perfectly healthy full term boy; the clinic patient aborted spontaneously at about the 4th month following "several" x-ray exposures directed towards the arrest of the Hodgkin's disease. Precautions, of course, were taken to protect the early pregnancy from possible damage but who can say which caused the abortion—the disease or the x-rays, or perhaps both were implicated. Hodgkin's disease and pregnancy is of extreme rare occurrence—a busy obstetrician could go through life and not see a single case. Since 1832, when Dr. Hodgkin first described the disease, there have been only 218 cases complicated by pregnancy reported in the world literature. Every physician doing obstetrics, however, should be able to recognize the disease in its early stages and to know that the Roentgen ray is a very beneficial therapeutic agent (even curative in early cases?). On the other hand he must also know that x-ray may cause abortion or may even produce pathological anomalies in the fetus when improperly employed. If x-rays are used, appropriate screening must be employed against possible injury to the fetus. Just any x-ray technician should not attempt this type of work. One must have had special training in the therapeutic effects of the x-rays upon tumor tissue and, in pregnancy, the possible harmful effects upon the fetus. Therapeutic abortion is not routinely indicated in these cases, although we can visualize a specific case, particularly in a young woman in which the disease was advanced and could

not receive, with safety to the fetus, sufficient x-rays during her pregnancy, might require therapeutic abortion. Apparently the disease *per se* has no effect on the baby. Occasionally the mother succumbs before or soon after delivery. Consultation should be had early and often. The management of these cases requires the combined knowledge of all the experts you can corral. "Study up" this subject—Your next obstetric case may be a Hodgkin's.

H.B.M.

A Study of the Vasopressor Effects of Oxytocics When Used Intravenously in the Third Stage of Labor

L. B. McGinty (*Western Journal of Surgery, Obstetrics and Gynecology*, 64:22, Jan. 1956) reports a study of the vasopressor effects of oxytocics given in the third stage of labor in 200 obstetrical patients. The series was divided into four groups; one group was given Methergine intravenously (0.2 mg.); the second group was given ergonovine intravenously (0.2 mg.); the third group was given 5 units of Pitocin intravenously and 5 units intramuscularly; the fourth group was the control group and was given 1 cc. of normal saline intravenously. All the patients were delivered vaginally under pudendal block anesthesia. In the group given ergonovine intravenously a significant elevation of blood pressure (20 mm. mercury) occurred in 26 per cent of the normotensive patients and in 25 per cent of the hypertensive patients. A severe elevation of blood pressure (above 170) occurred in six cases, four of which were in the hypertensive group. In the group given Methergine, 25 per cent of the normotensives and 26 per cent of the hypertensives showed a significant rise in blood pressure; there were only three cases showing severe elevation of blood pressure—one normotensive, and two hypertensives. In the group given Pitocin, there was a significant rise in

blood pressure in 27 per cent of the normotensive patients, and in 67 per cent of the hypertensives; 44 per cent of the hypertensives showed a severe elevation of blood pressure, but only one patient in the normotensive group showed a severe elevation. In the control group, 15 per cent of the normotensives showed a significant rise in blood pressure, but none of the hypertensives showed a significant rise. There was no instance of a severe elevation of blood pressure in this control group. Ten per cent of these patients had excessive postpartum hemorrhages. These studies indicate that Methergine is the best oxytocic for use in the third stage of labor, especially in hypertensive patients. A review of the literature shows that others agree with this conclusion. The vasopressor effects of oxytocics usually subside within an hour, which differentiates such effects from toxemia.

COMMENT

In our experience, of all the oxytocics in common use ergonovine raises blood pressure more consistently than all the others. Pitocin has long been our choice. Those who have used Methergine like it very much, largely because blood pressure is least affected and its oxytocic action is as good—some claim better as with pitocin or ergonovine. Except in toxemic patients with hypertension, we have never thought that pitocin, properly administered, raised blood significantly. Methergine, according to those who have employed it, interferes with blood pressure even less. Anyway their action on blood pressure never lasts longer than 45 to 60 minutes when administered properly. Remember this, you must know "when and how" to employ these drugs. They possess a definite potential of danger, very grave danger to both mother and baby.

H.B.M.

Use of Progesterone in the Treatment of Post-Partum Psychosis

W. H. Bower and M. D. Altschule
(*New England Journal of Medicine*,

254:157, Jan. 26, 1956) report a study of thirty-nine cases of post-partum psychosis; all but two of these patients had become psychotic during the first few weeks after delivery; these two patients had shown some personality difficulty during the puerperium, but did not develop an overt psychosis for six to eight months. Most of these patients showed "marked depression"; only a few were overactive. Thirty-four patients were treated by electroshock, ambulatory insulin and psychotherapy "alone or in various combinations." Of these seventeen were improved or showed a good remission that was maintained; seventeen showed a temporary remission, followed by a relapse (including one patient who committed suicide). Similar treatment in one or more courses resulted in remission and discharge in five more patients. Eleven of these patients were given progesterone with or without shock therapy; and five others were given progesterone with or without shock treatment as the first course of treatment. The usual dosage of progesterone was 100 mg. given daily by intramuscular injection for about ten days; then 150 mg. daily given by mouth; after discharge from the hospital, some of the patients continued to take the hormone for weeks or months. Of sixteen patients who were given progesterone alone or combined with electroshock and/or insulin all had good remissions, and only one showed a relapse; in the other fifteen cases the remission was maintained. In a follow-up period ranging from one month to five years, none of these patients have shown a recurrence. Three patients have given birth to another child without development of a psychosis. Four illustrative cases are reported.

COMMENT

The occurrence of postpartum psychosis is rather uncommon in "the run of the mill" obstetrical practice. However its occurrence is apt to be very upsetting to the family as well as to the attending physician. It therefore behooves every practitioner doing obstetrics to acquaint himself with at least the rudiments of psychiatric diagnosis and management so that any abnormal mental behavior associated with the postpartum period—hours, days or months—may be recognized early, and properly treated immediately. Recently, as with somatic medicine in general, abnormal mental and nervous states have received more intensive study than in "the old days," both in respect to cause and management. We have had no experience with progesterone in the treatment of these cases. Dosage and technique are recommended in detail in the above article. This treatment sounds reasonable and certainly deserves further study. Read this article—you will be well repaid.

H.B.M.

Bonamine: An Effective New Therapy in Nausea and Vomiting of Pregnancy

T. B. Lebherz and J. H. Harris (*Obstetrics and Gynecology*, 6:606, Dec. 1955) report the treatment of ninety-two patients with nausea and vomiting of pregnancy including eleven with hyperemesis gravidarum with Bonamine. In most of these cases the drug was given orally in a dosage of 25 mg. at bedtime, sometimes supplemented by 12.5 mg. or 2.5 mg. at noon, but in the eleven patients with hyperemesis gravidarum, who were hospitalized, Bonamine was given intravenously in a glucose infusion medium of in a dosage of 75 mg. a day, in three divided doses. This intravenous administration was not continued for more than seventy-two hours, and usually for only thirty-six hours, and treatment was continued by oral administration. Complete relief of symptoms was obtained in seventy-five patients, 81.5 per cent, including the eleven with hyperemesis gravidarum; good results (occasional nausea, but no

vomiting) were obtained in nine patients, and the treatment failed to give relief in eight patients. The only side effect noted was drowsiness in four patients including one who was an epileptic and was also taking phenobarbital, this was the only case in which Bonamine had to be discontinued. No adverse effects were noted even when Bonamine was given for prolonged periods, up to six weeks in some cases; in the few cases complicated by diabetes, heart disease, chronic ulcerative colitis, and renal insufficiency, these conditions were not aggravated. The prolonged action of Bonamine, which makes it unnecessary to give this medication in the early morning when the nausea "is at its worst," is of definite advantage in pregnancy.

COMMENT

The management of nausea and vomiting during pregnancy remains one of the toughest jobs we know about. Without a diagnosis of known etiology, treatment must remain empirical—rarely entirely satisfactory. This is well illustrated in nausea and vomiting of pregnancy. The number of agents recommended for this condition are legion—some worthless, some fairly efficacious, few wholly satisfactory. The personality of the patient is most important—perhaps the success or failure of your drug therapy depends largely on your insight into the psyche of your patient. Indeed we have managed successfully many of these women without drugs. We have had very little personal experience with Bonamine. However, as usual, we may expect some good results in certain patients with it. In fact, judging from published reports, this drug seems "tops" particularly in hyperemesis gravidarum where the drug can be given intravenously. Naturally the patient must be hospitalized. Don't ever neglect the personality of a pregnant woman suffering from nausea and vomiting. Kindly but firm persistence is "the price of success." Absolute confidence in the physician is "half the battle" in these women. Truly they are often most difficult. On the other hand, the younger physician who is successful in a few of these cases can sit back and watch his obstetric practice grow and grow and grow. But "gee whiz," doesn't the honest, conscientious doctor always have a big practice?

H.B.M.

New Sign in Roentgen Diagnosis of Advanced Ectopic Pregnancy

A. Weinberg and A. S. Sherwin (*Obstetrics and Gynecology* 7:99, Jan. 1956), describe a new sign of advanced ectopic pregnancy after viability, in a true lateral projection. In such cases the anteroposterior view shows gross malpresentation, absence of the uterine wall, and maternal gas shadows both overlying and below the fetus. In the lateral projection, the new sign is the appearance of fetal parts posterior to the lumbar spine; as the uterus is in front of the lumbar spinal column, any fetal part can be visible posterior to the lumbar vertebrae only if the pregnancy is extra-uterine. The search for this radiologic sign is of special importance in patients with diffuse abdominal pain or in shock. In the case in which this sign was first noted, operation showed an advanced abdominal pregnancy; a living full-term infant was safely delivered and survived.

COMMENT

As long as 25 years ago we published a paper on "Use of X-ray in Obstetric and Gynecological Diagnosis" in which we discussed the diagnosis of early intrauterine pregnancy (earliest film at 14 weeks) together with various pelvic complications of pregnancy. The fetal skeleton or parts thereof can be clearly demonstrated at 16 to 18 weeks of pregnancy—either intra or extra-uterine. Special technics of course must be employed. Furthermore adequate preparation of the field of vision must be accomplished. Gas and other intestinal debris makes for poor films. What Dr. Weinberg has described—that is his true lateral projection technic—serves, undoubtedly, to sharpen the final picture. We do not see however that his technic improves the diagnostic value of the process. After all "the all important" point is visualization of fetal bones outside the uterus and a good antero-posterior and/or an antero-lateral exposure gives this information. Refined technics in roentgenology, as in other departments of medicine and surgery, always makes for superior diagnostic information. What marvelous strides roentgenology has made since Professor Roentgen in the year 1895 gave to the world the first x-ray machine. What other modality has done so much for "us humans" throughout the world—and the end is not yet in sight.

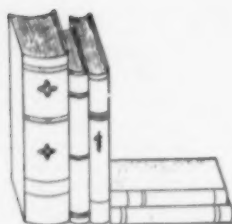
H.B.M.

CORRIGENDUM

In the June, 1956 issue of *MEDICAL TIMES*, on page 610, there appears a dosage schedule for Aminopterin and Methotrexate. In the body of the text, the dosages are correctly given. However, in the chart of dosages, the two drugs were inadvertently transposed. The correct reading of the chart is as follows:

DRUG	USUAL DAILY DOSE	
	Child	Adult
Aminopterin	0.25-1.0 mg.	1.0-3.0 mg.
Methotrexate	1.25-5.0 mg.	5.0-10.0 mg.

The Editors regret this typographical error.



Medical Book News

Edited by Robert W. Hillman, M.D.

Mental Health

Hospitalization of Mental Patients. A Survey of Existing Legislation. Geneva, Switzerland, World Health Organization, [1955]. 8vo. 100 pages. Paper, \$1.25.

This comparative survey has its sources in laws and regulations published in the *International Digest of Health Legislation*, and responses to a circular letter sent in 1953 from more than forty governments. Moreover, members of the Expert Advisory Panel on Mental Health, who examined the principles and attitudes affecting psychiatric treatment, express their views herein. This succinct publication, replete with tables, references, and legislation, is a veritable gold mine of data which reveal past and present changes in attitudes and commitment procedures of mentally ill persons. Herein are found references to treatment, development of institutions, and how legislation has been advancing to keep up with enlightened concepts which facilitate subserving the better interests of the mentally ill.

The civic minded physician, psychi-

atrist, lawyer, social worker, and all those intimately concerned with the hospital care of the mentally ill, will be grateful for this timely publication. The historical base gives a longitudinal perspective in understanding and evaluating the development of legislation, and how terminology and definition, as well as admission and discharge procedures, have been modified over the years. Those who are keeping abreast of the changing scene, will find, herein, a frame of reference for relevant evaluation.

FREDERICK L. PATRY

Therapeutics

Wine as Food and Medicine. By Salvatore P. Lucia, M.D. New York, Blakiston Co., [c. 1954]. 8vo. 149 pages. Cloth, \$3.00.

It is difficult to assign a place to *Wine as Food and Medicine* because of our present-day training. Any medicine of today must pass rigid controls of quality and uniformity in its manufacture, a series of clinical experiments, and is again controlled before it is accepted for general use. Wine cannot fit

any of these present-day requirements and so prove its efficacy. There is no doubt that wine "gladdens the heart of man" and in that it is good medicine for the flagging spirit.

The book, well done, is not easy reading. The complicated chemistry of wine is far afield from the average clinician. Therefore we shall assign it to a place on the reference shelf, but not among those of more immediate use.

PAUL I. KEARNEY

Hypnosis

Hypnotic Suggestion. Its Role in Psychoneurotic and Psychosomatic Disorders. A Thesis. By S. J. Van Pelt, M. B. New York, Philosophical Library, [1956], 12mo, 95 pages, illustrated. Cloth, \$2.75.

In this small volume of 87 pages, the author attempts to present hypnotism as a valuable therapeutic method in psychiatry. While his account of the historical and technical aspects of this subject are well done, his theory of the psychoneurosis and the illustrative case histories are entirely over-simplified. Indeed, the impression is given that a post-hypnotic suggestion is the only requisite to effect an eradication of neurotic symptoms. Hypnotism is one of our oldest phenomena in psychiatry and its nature and value are still debatable, yet the author feels he has written the last word. Nevertheless, it is recommended for the student of hypnotism as interesting reading but to be read with considerable reservation.

THEODORE MELTZER

BCG

Dried BCG Vaccine. By Yoji Obayashi, M.D. Geneva, [Switzerland], World

Health Organization, [1955]. 8vo. 220 pages, illustrated. Cloth, \$5.00. (World Health Organization Monograph Series #28).

The widespread use of BCG Vaccine has been general over a period of years, but less extensively in the United States than in other countries. The final role of the vaccine in the control of tuberculosis is yet to be determined. The World Health Organization and the United Nations Children's Fund have contributed generously to the campaign of vaccination in many parts of the world. One of the problems that has faced the workers in this field is the constancy of the antigenic character of the vaccine, and also the deterioration of the vaccine by heat and light. In an attempt to solve this problem, the author and his co-workers in Japan have carried out extensive investigations on the freeze drying of BCG vaccine in order to obtain a product of uniform potency and greater stability. The process of freeze drying results in a decrease in viability which is readily compensated by adjustment of the inoculating dosage. The great advantage of the new product is its prolonged antigenic potency.

This volume is designed neither for the general practitioner nor the specialist in tuberculosis. However, in the latter group there may well be some whose interest in BCG vaccine is sufficiently profound to delve into this highly technical presentation. For physicians who are actively engaged in the use of BCG vaccine, for bacteriologists with special interest in this field, and for research workers who are interested in BCG vaccine, this masterful work is invaluable and is highly recommended.

MILTON R. LOURIA

Medical Bibliography

Bibliographie des Sciences Médicales.

By A. Pauly. London, Derek Verschoyle, [1954]. 8vo. 1,758 pages. Cloth, £8.8.0. (Reprint of *Bibliographie des Sciences Médicales*, by Alphonse Pauly, Paris, Librairie Tross, 1874)

Medical bibliographies are essentially working tools, generally published in small editions and of little general interest except to medical institutions and libraries, scholars or the rare bibliomane. Eventually, in the vastness of time copies of these formidable and valuable volumes disappear from the market and are said to be "out of print." have little or no opportunity to acquire. The oncoming scholars or collectors additional copies. Except for the uncommon courage or altruism of an occasional publisher (who often takes a financial beating) the medical bibliographies are not generally reprinted. Thus the *Bibliotheca Osleriana*, in great demand always, and commanding a high price, has not yet been reprinted although it was originally printed in 1926. Most of the important medical bibliographies, mentioned in John Fulton's *The Great Medical Bibliographers* are today almost unprocurable through the usual channels of commerce. Were it not for the occasional reprint of some of these medical bibliographies even fewer would be available to scholars or librarians.

Thus the facsimile reprinting of the *Bibliographie des Sciences Médicales* is a happy event. The original edition was brought out in 1874. It was begun by Charles Daremberg, perhaps the greatest of the French medical historians, who died in 1872, and the book was completed by the addition of much ma-

terial by Mr. A. Pauly, which enlarged the original scope of the volume.

The *Bibliographie* is a formidable volume of 1758 double columned pages intending to supply classified material in chronological order. The classifications indicate a certain whimsicality of choice as they include Bibliography, History of Medicine, Professional History, History of Schools and Societies, Controversies, Medical Philosophy and Literature, History of the different branches of Medicine, including the History of Diseases, Hospitals, Epidemics and Endemics and even Medical Geography. There are further subdivisions into countries and subsections presenting the history of each period.

The present volume does not pretend to compete either in magnitude or in detail with other works in this field, such as *Billings Index Catalogue*, the *Haller Bibliothecae* or the *Choulant Bibliographies*, but nevertheless it is a worthy contribution and includes some references not to be found in the larger works mentioned. Obviously the references antedate the year of publication and the larger number of the more recent items are understandably French. There is an author index, which is always a valuable asset, but unfortunately there is no subject index which would be equally important as the subject classifications follow no alphabetical (or other) pattern.

The typographical errors of the original edition are facsimilied down to the present, the paper is not of the finest quality, but these are picayune criticisms of a fine reference work which belongs in every medical library and in the collection of the medical bibliophile or historian.

NORMAN SHAFTTEL

MEDICAL TIMES

Cardiology

A Primer of Cardiology. By George E. Burch, M.D. 2nd Edition. Philadelphia, Lea & Febiger, [c. 1953]. 8vo. 339 pages, illustrated. Cloth, \$5.50.

This primer carries out its purpose well. It presents to the medical student an overall view of the field in cardiology and shows him how to approach a patient who has a cardiological problem in a logical manner.

The book is replete with diagrams and pictures which are a great aid. Physical diagnosis is stressed, and appropriately so. The section on heart sounds is open to a good deal of criticism. It is strange to see that muscle vibration is listed as the primary factor in producing the first heart sound. This same mechanism is also given as the reason for the production of the third heart sound. There is much recent work to dispute both these statements.

FELIX TAUBMAN

Peripheral Vascular Disease

Peripheral Vascular Diseases. By Edgar V. Allen, M.D., Nelson W. Barker, M.D., Edgar A. Hines, Jr., M.D., with Associates in the Mayo Clinic and Mayo Foundation. 2nd Edition, Philadelphia, W. B. Saunders Co., [c. 1955]. 8vo. 825 pages. 316 illustrations, 7 in color. Cloth, \$13.00.

The second edition of this volume, comprising 800 pages is highly recommended as an up-to-date compendium of the latest opinions and newest types of therapy in the peripheral vascular field.

A fair amount of credit is given to other authors mentioned in the text, as well as the work done at the Mayo Clinic.

An interesting biography of early pioneers in the field, together with path-

ology and physiology of the many vascular problems is well presented.

There are numerous explanatory and helpful photographs, diagrams and tables presented.

This text should be in every hospital staff library, as well as on the shelf of those interested in this field, as a handy and complete reference book.

HUGH L. MURPHY

Obstetrics

Clinical Measurement of Uterine Forces in Pregnancy and Labor. By S. R. M. Reynolds, D.Sc., Jerome S. Harris, M.D. & I. H. Kaiser, M.D. Springfield, Illinois, Charles C. Thomas [c. 1954]. 8vo. 328 pages, illustrated. Cloth, \$9.50.

This book gives a detailed description of the physiology of labor with a careful study of its mechanisms. This has been worked out by means of various types of Tokodynamometers—instruments by which the force of uterine contractions is measured. A complete description of the methods by which the records were obtained as well as illustrations of the contraction patterns of various types of labor both normal and abnormal, is given.

In the final portion of the book the effects of psyche and of various drugs on uterine contractions are described. This section will be of particular interest to the practicing obstetrician in this age of "Natural Childbirth" and elective inductions. The rules for the use of the pitocin infusion are clearly and concisely stated as well as the contraindications for its use. This volume while of interest to anyone who does obstetrics will be of particular value to anyone teaching the subject.

WINFIELD E. STUMPE

Cancer

Cancer Cells. By E. V. Cowdry, Ph. D. Philadelphia, W. B. Saunders Company, [c. 1955]. 8vo. 677 pages, illustrated. Cloth, \$16.00.

Dr. Cowdry's expressed purpose "to introduce the reader to the more important facts about cancer cells, to raise questions considered important, and wherever possible, explore the issues for himself" is admirably accomplished in this important contribution to cancer literature. The introductory chapters deal with definitions and classifications of neoplasms and the known properties of malignant cells. Much of this is presented in a most elementary manner. The bulk of the book concerns our present knowledge of the etiology of malignancy and such related factors as heredity, age and sex susceptibility to cancer, latency and modifying factors in cancer development. Methods of diagnosis and treatment are only superficially outlined. The last chapter presents the present day status of cancer research and emphasizes the need for some overall organization and direction that is being met to some extent by national and international committees. A selected group of references presented in an appendix and an extensive bibliography add greatly to the value of the book.

PHILIP G. CABAUD

Gynecology

Gynecology, Surgical Techniques. Compiled and edited by Robert J. Lowrie, M.D. Springfield, Illinois, Charles C. Thomas, [c. 1955]. 4to. 523 pages, illustrated. Cloth, \$17.75.

This volume is a compilation of articles written by 58 outstanding gynecol-

ogists from the United States, Canada and England. It reflects the teachings and research in the leading medical schools, hospitals and allied institutions throughout the world. Many of these surgeons are renowned for their interest in special operations, some of which were devised by them. These are described lucidly and are well illustrated. The same procedure is sometimes presented by two or more surgeons because their approach to the problem differs as does the surgical technique. Data about operations in related fields, such as urology and intestinal surgery are included because any gynecologist who operates must know how to perform them.

The chapter on operations for relief of patients with intractable pain should be of special interest to all gynecologists. One who cannot cure but who is able to bring relief to such patients will be highly praised. The illustrations in this book are both beautiful and instructive, qualities which are most important in a volume on surgical techniques.

JOHN M. TORTORA

Forensic Medicine

The Physician and the Law. By Rowland H. Long. New York, Appleton-Century-Crofts, [c. 1955]. 8vo. 284 pages. Cloth, \$5.75.

The purpose of this book, as stated by the author in his preface is twofold: "To afford the practicing physician some knowledge of the rules of law which govern his conduct in the physician-patient relationship; to help the physician who has to appear in court as a witness in a case in which it is necessary to prove facts relating to injury, disease, and the causal relation between injury or disease and death."

Every practicing physician should read the chapters on The Relationship Between Physician and Patient and Malpractice. The text is exceptionally well written, concise, easy to read, and illustrative cases are cited including precautions to be exercised in the use of known remedies.

As stated in the Foreword by Milton Helpern, M.D., Chief Medical Examiner, New York City, "the legal responsibilities and medicolegal situations arising out of the practice of medicine in our increasingly complex society create many legal hazards against which the physician should be constantly on guard."

It is quite obvious that the author has done a tremendous amount of medicolegal research and is well qualified to discuss the subject matter authoritatively. He is a member of the Massachusetts and New York Bars, and a Lecturer in Forensic Medicine, New York University, Post-Graduate Medical School.

This book should be in the hands of every practicing physician.

Please note:

- (1) The word "not" on page 202, par. 2, line 8 should be omitted.
- (2) The word "X-ray" should be inserted before the word "examination" on page 206, line 22. (This relates to subdivision 2f of Section 6514 of the New York Education Law, "except payment, not to exceed thirty-three and one-third per centum of any fee received for x-ray examination, diagnosis or treatment, to any hospital furnishing facilities for such examination, diagnosis or treatment.")

S. L. HORNSTEIN

The Roentgen Aspects Of The Papilla And Ampulla Of Vater

By

MAXWELL H. POPPEL, M.D.

HAROLD G. JACOBSON, M.D.

ROBERT W. SMITH, M.D.

This is a complete presentation of the roentgenologic survey of the anatomy, physiology and pathological states of the Vaterian region. It brings integration and meaning into a complex subject by presenting an inclusive affirmation approach not heretofore attempted.

The abnormalities of adjacent structures (notably the duodenum) are considered. This is especially important in formulating correct differential diagnosis.

Roentgenologically considered, what are the criteria for appraising any given major papilla or Vaterian ampulla as normal or abnormal? The answer cannot be found in the existing roentgen literature so the authors have searched for the answer and set down their findings.

The approach is roentgen study from the basic anatomic (postmortem) and from the practical (in vivo) standpoints. The microscopic pathological findings obtained from surgical specimens and from autopsy material served as a bridge of explanation for those roentgen findings which did not conform to the normal basic anatomical types (including variants).

211 pages 150 illustrations

\$8.50, postpaid

CHARLES C. THOMAS • Publisher
Springfield, Illinois

Guest Editorial



John G. Mateer, M.D.*

Preventive Medicine— Why and What?

To the thoughtful, conscientious and forward looking practicing physician, preventive medicine, with its various ramifications, presents a tremendous *challenge*, which to date has not been emphasized as much as it is bound to be in the immediate future.

The increasing medical knowledge of the public is resulting in a request for more instruction and protection. Patients are profoundly appreciative of information about the prevention or early detection of physical disorders. The practical dividends to the patient are much greater from this approach than from that of concentrating on the diagnosis and often ineffective efforts in treating fully developed disease. Patients are interested in the diagnostic evaluation of their condition mainly because they hope that this preliminary effort will lead either to prevention of disease or to its early detection and correction. The fact that a patient has no symptoms or signs does not mean that a condition urgently in need of medical evaluation is not present.

The physician should appreciate the well established observation or fact that there are different degrees or levels of health. For example, there is a striking and obvious contrast between the health level of the tired, nervously tense, middle-aged business man without demonstrable organic disease but with an array of uncorrected faulty habits, and a similar individual who has decided to follow his doctor's advice, has corrected these habits and profited from a month of complete rest and out-of-door vacation. Patients should be challenged to attain and maintain as high a health level as possible.

Secondly, much more emphasis should be placed upon the detection and correction of early pathological physiology by conducting the now available and *highly sensitive* function tests of various organs. In the future, undoubtedly additional highly sensitive function tests will be developed which will enhance still further the opportunity to detect early functional impairment.

* Physician-in-Chief Henry Ford Hospital, Detroit, Michigan.

However, positive results from tests now available afford *objective* evidence of early abnormal function, often before anatomical disease has developed. Such concrete evidence will sometimes induce a reluctant patient to eliminate the contributing etiological factors when the physician's persuasive powers otherwise may fail.

The functional deviation may be corrected then, before anatomical pathology has developed.

In the third place, patients now frequently request so-called "annual health checks." These studies, in the absence of any symptoms or positive physical findings, may disclose serious, *early organic* pathology. Early pre-clinical diagnosis and subsequent therapy can either eliminate or usually curtail the progress of the disease. Studies of this

kind should be comprehensive enough to reasonably eliminate any type of early pathology present.

One further point: The fact that the ultimate or final etiology of many disease processes is unknown should not discourage the physician from using an *etiological approach* to therapy or to the elimination of the *probable contributing* factors.

In order to plan the program of treatment designed to raise the individual's health level, to correct demonstrated pathological physiology or to discourage the progress of early pathological anatomy, one should determine as far as possible *all* probable contributing factors and then attempt to persuade the patient to eliminate all of them. In fact, this is the main secret to successful therapy in a high percentage of patients.



WANT A CHUCKLE?

SEE

"OFF THE RECORD . . ."

SHARE a light moment or two with readers who have contributed stories of humorous or unusual happenings in their practice. Pages 15a and 19a.



Henry Ford Hospital

The Henry Ford Hospital, centrally located within the City of Detroit, is a non-profit medical center comprising an 850-bed general medical and surgical hospital, outpatient clinic, research institute, and tuberculosis and psychiatric units.

In addition, the center houses a 24-hour emergency division for accident victims, as well as acute medical and surgical problems.

The hospital staff is composed of 400 physicians, including interns and residents, trained in the medical specialties as well as doctors of the basic sciences. Staff emphasis is on the total medical care of the patient, medical education at the graduate level, and medical research in the clinical and basic sciences.

Care To support the hospital staff in providing comprehensive medical care for all types of patients, chronic and acute medical and surgical, the hospital and outpatient clinic are equipped with complete technical diagnostic and therapeutic instruments and equipment.

Many patients receive lifetime medical care from the doctors of the staff. Each patient is made to feel that he has a personal physician of his own choice who advises him about his medical problems. The administration and staff believes this concept is essential to quality medical care. At the same time, the

patient is aware that specialists in every field of medicine and surgery are readily available to assist with complicated problems.

The large outpatient department supports a broad preventive health program. Ambulatory patients are encouraged to come to the outpatient department for complete examinations not only in the earliest stages of a disease process but even before any obvious symptoms are observed by the patient.

Hospital Mr. Henry Ford and the Ford Family originally accepted the financial responsibility for the erection and operation of the hospital. The hospital was opened in October, 1915.

In keeping with the trend that patients today seek smaller room units than the ward, most accommodations at Henry Ford are private and semi-private.

In order to provide specialized nursing care and to have special equipment near at hand, some floors are arranged for specific medical problems while others are kept general in function. For example, most heart patients are together on the same floor. Similarly, orthopedic patients are usually grouped in a single area.

As in most hospitals of this size, pediatrics, obstetrical, tuberculosis, and psychiatric patients are accommodated in individual sections of the hospital. On

the other hand, some floors are mixed medical and surgical patients, the emphasis being on the type of accommodation desired by the patient rather than the disease condition.

The hospital is connected to the outpatient department and in-patients are frequently taken to the clinics for technical procedures (such as x-ray, pulmonary function studies, consultation) since more exacting study can be made in the clinic than in the patient's room. The close physical relationship between the hospital and clinic gives the doctor easy access to the hospital floor when a problem or an emergency situation arises.

Outpatient Department The outpatient clinic of the Henry Ford Hospital is a seventeen story building housing the offices of the staff and their clinical suites. About two thousand patient visits are made each day to the various clinics of the outpatient department at the hospital.

While some hospital patients are also seen in the clinic for technical studies and for consultation, most patient visits are for ambulatory care.

Each medical and surgical specialty as well as general medical services are allocated to specific areas of the outpatient building. In this way the technical facilities and the trained personnel are economically located for optimum use by doctors and patients.

X-ray One clinic floor consists entirely of x-ray facilities, both diagnostic and therapeutic, including a cobalt unit. These facilities are available to patients from both the hospital and the outpatient department. In other areas, such as orthopedics, cardiology and pulmonary, there are individual x-ray units allowing for complete diagnostic work within the specialized clinic.

Laboratories The same is true for laboratories. One floor of the clinic has a central laboratory for the majority of the studies of both the hospital and the ambulatory patient. Each clinic however may have a specialized laboratory within its own area. One floor is completely equipped with operating suites while another is largely a physical medicine and rehabilitation unit. Ample space is provided for the rehabilitation and training of patients to be function-

The teaching program at Henry Ford Hospital includes regularly scheduled teaching seminars such as the one pictured here on neurology and neurosurgery.





Dr. Oliver H. Geesler, Director of Bio-Chemistry of the Edsel B. Ford Institute for Medical Research, checks information on the Institute's mass spectrometer.

ally useful following accidents or illnesses.

Special Medical Services As in other large medical centers, Henry Ford provides certain technical medical services which for practical reasons, can-

not be incorporated into the average community hospital. One of these services is an audiology and speech rehabilitation center. The physical medicine, occupational therapy and rehabilitation unit is another important feature of modern medical care available at Henry Ford. The uses of radioisotopes employed at the hospital are established diagnostic and therapeutic techniques, as yet, feasible only in the larger medical centers. The hospital's pulmonary function laboratory is another of the important adjunctive services.

Staff As the scientific aspects of medicine have developed in the past two decades, it has become essential that the hospital medical-professional staff include the knowledge and the methods of the chemists, physicists, physiologists and social scientists in the study and the treatment of patients. The staff of the Henry Ford Hospital has some twenty doctors in the basic sciences to augment patient care, medical education and

Dr. William R. Eyler, Radiologist-in-Chief, and Dr. Conrad R. Lam, Chief, Thoracic Surgery, hold a combined cardiology-radiology teaching conference for physicians.





clinical and basic science research.

As a medical institution which has a vital interest in teaching, the majority of the staff has been trained in specific fields. All branches of medicine and surgery are represented. Because the staff is interested in personalized medical care, an effort is made in the medical services to give the broadest type of such care.

At the present time the hospital, recognizing the need for doctors practicing in the general field of medicine, is developing a residency in general practice.

Graduate Education One of the important responsibilities of the large hospital is its medical education program. The staff of the Henry Ford Hospital believes "in an active and extensive teaching program."

"The educational effort is not only a responsibility for the training of young physicians and the advancement of the nation's health resources, but also the means by which the staff continues its own growth in medical knowledge.

"The training program of the hospital is primarily on the level of graduate medical education. It is the feeling of our staff that interns and residents are

The modern reading room, located on the seventeenth floor of the clinic building. Thick carpeting, acoustical tile, comfortable furniture, excellent lighting, all contribute to the attraction of this fine facility.

The "stacks" of the reference library contains more than 25,000 volumes.



Motion picture camera records surgical techniques during operative procedure at Henry Ford Hospital.



no longer students but doctors seeking to advance their knowledge by graduate study."

The volume of patients in both the inpatient and outpatient departments, together with the supervision of the staff is the basis for the educational opportunity.

Most of the training is conducted through daily contact with patients in the hospital and clinics, on teaching rounds, case teaching in conferences, seminars, and staff meetings. Also, some time is devoted to didactic instruction, particularly in the basic science seminars.

Both residents and interns are encouraged to assume responsibility in the management of patients and in every instance, try to gain the confidence of the patient as a major key to the practice of medicine. The medical educational program at the Henry Ford Hospital includes internship training and twenty approved residency programs.

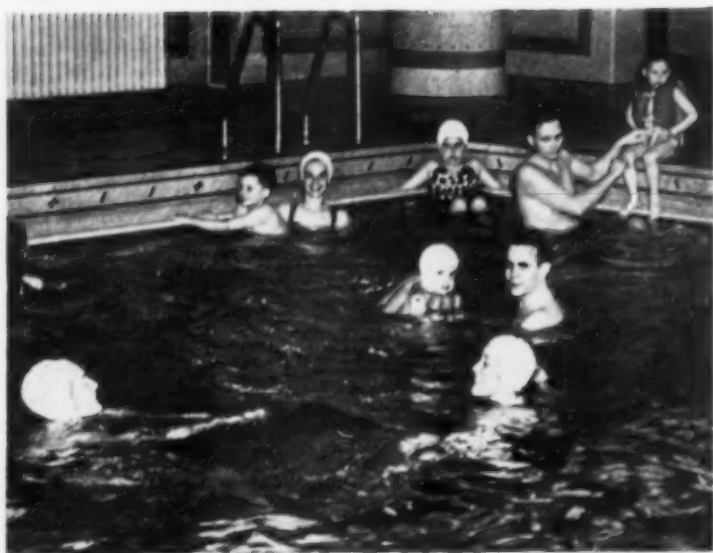
Conference Schedule

In the graduate medical educational program careful attention has been given to providing the intern and resident with a broad background on which to build his future practice. The general program is a part of the wide scope of training available to residents at Henry Ford to equip them for practice or for continuing their specialized medical education:

MEETING	PERIOD
Teaching Ward Rounds	Daily
Medical Staff	Weekly
Surgical Staff	Weekly
Divisional Conferences (from one to three meetings)	Weekly
Clinical Pathological Conferences	Weekly
Surgical Pathology	Weekly
Basic Science Seminar	Weekly
Clinical Radiology Conference	Weekly
Tumor Conference	Monthly
Hospital Medical Society	Monthly



Food and conversation in the doctor's dining room.



Staff members teach their children to swim at the hospital pool.

The Libraries The medical library of the hospital contains over twenty-five thousand volumes. It receives about four hundred journals including important foreign clinical journals, basic science journals and journals from allied fields. The libraries are open every day except Sunday and every week day evening. The volumes and the journals may be removed from the library or they may be set up in bibliographical groups for study in the library. There are special small libraries in the research institute that may be used when a technical problem arises.

Research An extensive program in both clinical and basic science research is being conducted at the hospital. There are some eighty different projects at the present time. Provisions are made for laboratories for the clinical staff to pursue investigative work that has been approved by the research committee.

The Edsel B. Ford Institute for Medical Research has been engaged in research in the basic sciences for the past ten years. The Institute has a Department of Chemistry and a Department of Physics. While there is some collaborative work with the clinicians of the hospital, most of the work is limited to research in the basic sciences. At the present time, the doctors of the Institute are working on such projects as the metabolic effects of hormones, cholesterol metabolism, enzyme research, particularly succinic dehydrogenase, infra red spectra and x-ray diffraction identification of various steroids. The radioactive isotope laboratory of the hospital is located in the Institute.



The hospital bowling league rolls through its fifteenth season. Bowling on local alleys, hospital staffers find recreation and first class competition in the sport.

Recreation Among the most enthusiastic sportsmen of the staff are the bowlers. The hospital bowling league, in existence for fifteen years, has sixteen teams with a handicapping system to make all teams on an equal basis in competition. There is also a hospital soft ball team and a basketball team which competes in a city wide league. The hospital has a gymnasium for indoor activities. On the grounds are two tennis courts. For the swimmer there is a large indoor pool with a lifeguard on duty during the swimming hours. Some evening hours are set aside for the families of the staff to use the pool. Also, there are indoor handball and squash courts.

Socially, there are a number of yearly dances, informal parties, card parties, and meetings of wives' groups.

Operation Narcotics

A factual report on narcotic addiction and how the addict uses the physician as a source of supply. Also, some valuable tips are presented on handling the "high explosive" in your medical bag.

EDWARD R. BLOOMQUIST, M.D.

Here was the darkness of an early morning. And in the sky, uncountable pinpoints of light looked down upon the world from a soft blanket in indigo. Far below, on a deserted city street, a lone figure stood in the shadows, his dark business suit blending into the stillness about him. Shifting the weight of his medical bag from one hand to the other, he paused for a moment to enjoy the cool morning air.

He never knew what hit him.

Stretched on the sidewalk, he opened his eyes to find a fast-rising lump on his occiput, his wallet stripped of negotiable contents, and his equipment strewn haphazardly around him.

The object of this attack?

Narcotics.

Far more precious to the unseen assailant than the few dollars lifted from the inert physician were the selected contents of his bag — morphine, Demerol, and the all-important prescription pad.

Although less than 10% of the nar-

cotic addicts in this country use morphine as their primary drug, both morphine and methadone are important to the addict. Both share the characteristic of allaying withdrawal crises in persons temporarily out of their regular narcotic.

And prescription blanks, easily forged, represent a gold mine of narcotics obtainable at a low price from any legitimate pharmacy failing to detect the forgery.

Legislation Prior to 1915 when the Harrison Narcotic Law, designed to control the domestic manufacture, sale and distribution of narcotic drugs, became effective, physicians were permitted to treat addicts as they saw fit. And opiates were available to the general public. But physicians, appalled at the growing number of addicts in the country, urged new legislation. At their insistence, nearly every state soon passed laws prohibiting the sale of opiates except on prescription.

Legislation became increasingly strict

until today both the sale and use of narcotics is rigidly controlled by law enforcement officers.

Question A stormy debate has arisen since the Harrison Act was passed. The argument concerns the correctness of government control of narcotic usage and the constant surveillance maintained by its law enforcement officers over the physicians.

But discussion of this problem is not in the scope of this paper. We have limited our discussion to the way the situation now stands, rather than treat of the many pros and cons concerned with how it should exist.

Big Business Operation Narcotics is big business. Many an addict has paid dearly for his affiliation with this business and with its underworld merchants.

In 1955, of 23,718 prisoners serving sentences for federal offenses, 3,633 were imprisoned for violations of the federal narcotic and marihuana laws. This number is one measure of the successful efforts extended by the Honorable Harry J. Anslinger, Federal Commissioner of Narcotics, and the men of the Bureau of Narcotics of the U. S. Treasury Department.

These officers, although they constitute only 2% of the total number of federal law enforcement agents, have been responsible for 15.6% of the total prison population serving sentences for violations of federal laws during the year 1955.

Their constant vigilance has also paid remarkable dividends in the amount of drugs confiscated while being smuggled into this country from Mexico and the Orient. In 1955, the Bureau seized, among other items, 42,336 ounces of marihuana, 2,503 ounces of heroin, 87

ounces of morphine, 305 ounces of raw and 532 ounces of prepared opium.

How much got through the barrier of agents to be dispensed and consumed illegally is difficult to estimate.

Professional Sources Unfortunately a certain amount of narcotics leak through to the addict from sources that are otherwise considered legitimate. Although smuggling is the primary source of supply for the majority of illegitimate markets, it doesn't hold a monopoly.

After a close review of the situation, the Bureau has noted with regret that a significant portion of these illegitimately used narcotics have been solicited from professional people; although most of these solicitations have been successful only because the professional source has been duped.

And, as in the sample leading off this article, another portion has been obtained through the assault and battery route, removing the desired material from its possessor through physical violence or at gunpoint.

Doctor Addicts There are, however, two other classifications which cause the Bureau an unending series of headaches (for which, incidentally, they have an unusually potent aspirin.) The first is a small but significant group of professional people whose personality problems lead them to utilize narcotics themselves. The second group is composed of those physicians who sell their profession for the price of a narcotics prescription.

Considering the fact that there were 238,695 practitioners of medicine registered under the federal narcotic law in 1955, the total of 155 cases of addiction in the medical and allied professions (referred by the Bureau to the



respective licensing boards) is quite small. This is particularly true when one recognizes that this group contained representatives of various components of the profession, doctors of medicine, dentists, veterinarians, osteopaths, chiropractors, pharmacists and nurses.

Treatment Fortunately, addicted members of this group usually recognize their precarious position and either from personal or professional pressure soon present themselves for treatment. *(Physicians interested in a further discussion of this phase of the narcotic problem will find additional material in the film, "Narcotic Addiction, A Medical Hazard." This may be requested by any medical group by writing Dr. Martin Lasersohn, c/o Winthrop-Stearns, Inc., 1450 Broadway, New York City.)*

Esaues The second group is hard to comprehend. This small handful of professional Esaues have difficulty explaining their activities. Their reasons probably date back to when the Phoenicians invented money.

The amount of narcotics dispensed by these few men is sometimes staggering.

A New York physician, for example, was indicted in April 1954, on seven

counts in violation of the federal narcotic laws. A federal agent, working on an undercover investigation, was given a total of 18 prescriptions for Dilaudid tablets within a period of 26 days without the inconvenience of a preliminary physical examination.

The cost to the "patient" was \$5.00 per prescription.

On one occasion the prescriber obligingly wrote four of these prescriptions, placing a different name on each of the blanks for the convenience of the buyer. On two instances he wrote prescriptions for narcotics in the presence of two undercover federal agents. In addition to this, the records of this man showed the purchase on one date of 1,000 Dilaudid 1/16 grain and 1,000 morphine 1/2 grain tablets, for which he could not or would not account. A spot check of neighborhood pharmacies disclosed he had written 551 prescriptions over a period of 16 months. These blanks accounted for the sale of 10,620 Dilauidids 1/16 grain, 4,160 morphines 1/4 grain, 450 Pantopons 1/3 grain, and 1,910 tablets of Dolophine. The end result of this nefarious racket was five years in prison, a \$3,500 fine and one more blot on an honorable profession.

Illegal Task During the same year, a Seattle physician took upon himself the illegal though remuneratively satisfying task of gratifying the narcotic requirements of numerous addicts.

In a period of less than four years he dispensed almost a half million tablets of $\frac{1}{2}$ grain morphine by injection to addicts. And during a period of 18 months this one offender used almost four and one-half times the total amount of morphine dispensed by all the 23 hospitals and 172 practicing physicians of that city.

Fortunately, this type of person represents a minor fraction of the medical profession, but the existence of even one such person is enough to prod the Narcotics Bureau into a never-ceasing watchfulness. The Narcotics Bureau feels that "one addict is one addict too many." And the M.D. aberrants present a challenge—a challenge that is efficiently met.

Protection When a physician enters practice he immediately encounters the wall of protection which has been erected by the Federal Narcotics Bureau for the safety of both the doctor and his patients.

To some, these precautions may seem unnecessarily harassing and dictatorial; but to those who have had to deal with cases of professional deviation, they seem both reasonable and just.

Registration The physician's first connection with narcotic regulations occurs when he applies for registration under the Harrison Narcotic Law. He does this by writing the Collector of Internal Revenue in the district in which he plans to establish his practice. Once registered, he is given a narcotic registration number and issued a special stamp. This stamp must be renewed each

year. A one dollar fee is charged annually for this service. With each renewal, the physician must declare all narcotics on hand; this inventory is made on a special form #713 (the duplicates of which must be kept on file for spot inspection over a period of two years).

Each year the old stamp is replaced by the new and posted in a conspicuous place at the location of practice.

Should the physician move to a new district, he must reapply for a new registration number, for the one he used in the previous district is now invalid. If a physician moves his office, he must within 30 days execute a new return on form 678 A, marking it "revised registry."

Prescription Blanks in some states where special triplicate prescription blanks are required, they are provided free of charge by the Office of the Collector of Internal Revenue. These are issued in serially numbered books in sets of four books.

The use of prescription blanks for prescribing narcotics has been carefully outlined by the Bureau to avoid alteration or misuse. First, and quite important, they must never be used to stock one's office supplies. True, it is a simple matter to write for 20 morphine sulfates, grain $\frac{1}{4}$, give the patient one, and utilize the remainder for 19 other patients. This method is convenient, quick, economical and obviates the necessity of keeping records. It has one drawback. It's about as safe as sleeping with a hungry boa constrictor. The Bureau, of necessity, views this practice with extreme disfavor.

Office Use Official triplicate order forms for obtaining narcotics for office use can be purchased from the Col-

lector's office for ten cents a book. When narcotics are desired for general office use the original and first carbon copy are sent to a qualified manufacturer. He will, in turn, forward the carbon copy to the Bureau of Narcotics when he delivers the drugs to the physician. The second carbon copy must be kept in the physician's files for two years.

No Erasures All official prescriptions must be written, without erasures or corrections, in ink, indelible pencil or typewriter.

The latter method requires the signature of the physician in addition to the typing. All blanks must be filed completely.

Fictitious names can never be used.

The Bureau advises against the writing of narcotics in any way so that the number of tablets prescribed can be altered (i.e. "morphine sulfate grains $\frac{1}{4}$, # 10," or, "grains $\frac{1}{4}$ # X"). It is far safer to spell the number out, viz., "ten."

Telephone One of the most frequently noted irregularities is the telephoning of narcotic prescriptions. While this is a controversial point of the law—it is, at present, illegal to telephone (with the exception of certain narcotic drugs or compounds of narcotic drugs included in Public Law 729 that possess relatively little or no addiction liability).

Furthermore, your call places your pharmacist in an unfortunate situation because of his desire to please and keep his physician customers.

If he yields, both he and the doctor can be indicted for the violation.

In cases of emergency, a pharmacist can deliver narcotics to a physician. But the prescription blank must be presented to the pharmacist or his agent before final delivery, except under the

most unusual circumstances. Otherwise, the transaction is illegal.

Safety All blanks must be kept in a safe place, particularly out of the reach and sight of visitors to the office. Any loss of blanks must be reported to the Bureau as soon as it is noted. This is not an unusual happening. In 1955, 37 thefts and 226 cases of unaccounted for losses of order forms were reported to the Bureau by physicians.

The presence of these blanks, along with the small amount of narcotics the physician carries in his bag, presents a strong argument against the use of a caduceus on the physician's car, or an auto license plate with M.D. initials. Certainly, no physician with any sense of responsibility will leave his bag inside his car so it is visible to a passerby. The trunk is more difficult to enter and, for that reason, is the place of choice for storage when the bag is not in use.

Addict Many physicians will meet with problems involved in the handling of a narcotic addict.

Often these contacts occur with the physician being totally unaware of their existence; the addict is a clever person. He is driven on by an insatiable appetite for drugs.

In other instances, the addict may play on the sympathy of the doctor. Narcotic officers point out that sympathy on the part of the physician is one of the main problems in doctor-addict relationships.

The physician wants to believe the addict when he says he's trying to kick the habit. Although he may have some reservations, he wants to give the addict a chance and so will give him a few morphine tablets, or write him a prescription.

Not uncommonly he finds the addict

parked on his doorstep the following morning. The Uriah Heep approach used the day before is now gone. Instead the addict points out, "You know, Doc, what you did yesterday was illegal. You knew I was an addict and still you gave me junk. Now I'll make you a deal. Give me fifty more tablets and I'll leave you alone. If you don't I'll go to the papers and tell my story. The police might be interested too!"

Disaster Actually, though this threat is hollow, the doctor, in a sudden panic, doesn't realize this. He gives in, becoming a victim to further blackmail. At any point the physician can break the chain by contacting a law enforcement officer. Sometimes, unnecessarily fearing reprisals from the law, he goes deeper into a mire until disaster results.

Dependence Generally, addicts are characterized by three separate phenomena: a compulsion to continue taking the drug—a compulsion that will often drive them to use any means to procure the drugs to satisfy their craving—a tendency to increase the dose of the drug, and finally a psychological and physical dependence on its effects.

Addicts with few exceptions fall into two groups. The smallest of these consists of persons who become addicted during a long and painful illness. These patients will often lose their physical dependence by a gradual withdrawal of the drug. Sometimes, however, the dependence continues. When it does, it can become a trial, both emotionally and legally, to the physician who introduced narcotics to his patient.

Several cases within the last few months have been tried and successfully won where a charge of causing addiction was placed against the phy-

sician. For this reason among others, it would seem wise never to use the same narcotic for any length of time on a patient unless there is an incurable disease present. It is also advisable to discontinue narcotics at the earliest possible moment, substituting other analgesics when possible.

Emotional Need Far more common is the group in which addiction represents a psychiatric abnormality. In this instance the drug fills an emotional need, supplying a synthetic sense of security. The same characteristics are noted in the chronic alcoholic and barbiturate addict to a lesser degree.

The appearance of the addict is deceptive. He may be your neighbor next door, a professor at the university or a bum from skid road. Records show the addict to have an abnormally high history of previous criminal activities. Four out of five are males. More than 54% under the age of thirty. About 9% are under 21, and nearly all of these are near their majorities. Since 1954 there has been a decrease of 4% in the under 21 age group and an increase of 4% in the 21-30 group.

Of 7,454 addicts processed in 1955 by the Narcotics Bureau, 6,439 were Negro, 798 Caucasian, and 217 others. It is notable that since 1954 there has been an increase of 3.21% among Caucasians with a concomitant decrease of 7.91% in the Negro group. The miscellaneous group has increased by 1.68%.

Expensive Habit The drug of choice is heroin, although there was a slight drop (2.08%) in the use of this drug with an increase (1.85%) in morphine usage in 1955.

Heroin is preferred because it produces a greater effect than other nar-

cotics. Obtaining this illegal narcotic, however, requires a contact with underworld sources.

The cost of the habit is high, the average addict laying out between \$50-75 per week to maintain his habit. In some instances the cost may run up as high as \$50 per day.

Much to the addict's distress, its distributors work only on a cash and carry basis. As a result, drug addiction and the illicit narcotics traffic were responsible for a significant number of crimes committed last year, crimes to get money for the purchase of narcotics.

Currently, there are approximately 60,000 addicts in this country. While this is an improvement since the late 1800's when addicts numbered one in three hundred, our current rate of one in three thousand is still larger than that reported by any other Western nation.

Each year, illicit narcotics traffic runs over \$500 million.

With these and other facts before them, a Senate subcommittee stated in their 1955 report that narcotic addiction and traffic presents one of the most serious problems facing our nation today.

Abnormal Fear Psychologically, most addicts share one characteristic—an abnormal fear of the possibility of being hurt. They are, therefore, prone to search for some method to aid in dulling their perceptions both to physical pain and oppressive circumstances. Narcotics offer the addict the crutch for which he is searching. Interestingly enough, with the exception of the "mainliners" (those who use narcotics by the intravenous route), euphoria does not continue past the early stages of addiction. For the majority, the drug at

first offers an escape from reality. Eventually, the user loses the above normal response and reacts at the level he would have maintained had he never become addicted.

The Beginning Addiction starts in many instances with impressionable youths being intrigued by the antics of a person they admire. Conversely, some may begin in order to attain or maintain a position of prestige in their circle of friends. Occasionally, it results from thrill seeking.

Most often a teenager will be coerced into using narcotics, fearing the social stigma of being classified a square, cube, octagon or some other geometrical appellation indicating misfit.

As you might expect, more than ninety percent of addicts appearing before the Senate subcommittee last year stated that they began using drugs because of associates and friends. If it were possible to explain why these young people were more interested in being accepted into a herd of criminally inclined individuals instead of joining church or constructive youth groups, we might have the key to answer the question, "Why does narcotic addiction exist?"

Varied Response Narcotics affect their users in different ways. Each drug presents a different reaction and each person shows some variation in his own response. The story is told by a veteran narcotics officer which concerns three addicts, obviously hopped up, who found themselves locked out of their hotel apartment.

"Let's send for the manager," suggested the heroin addict.

"Hell no," responded the marihuana habitue, "kick down the door!"

"Aw, get with it, man," interposed

the cocaine user, "let's squeeze through the key hole."

Despite this variance, unless the addict is desperately in need of his drug, a physician's encounter with these people need not be dangerous or unpleasant.

But the majority of addicts use carefully worked out approaches that often catch the doctor unawares.

User "My wife has incurable cancer, and her doctor always prescribes morphine when she is in pain because that is the only way she can obtain relief. Unfortunately, we are traveling across country and ran out of medicine. Won't you help us, Doctor . . . please?"

This is a touching story and plausible, too. Examination of the patient may prove of small value in detecting the fraud. If she is a user she is also artful, clever, convincing. She will know all the symptoms and can produce them on a moment's notice. Several diseases are used as dodges by addicts who work physician's offices. All are difficult to distinguish from the actual pathology. All are acute. Renal colic, angina pectoris, migraine, asthma, tic douloureux and the always popular "back ache" are frequently used ruses.

Risk Doctors who yield to the pressure or relax in their attitude toward the addict will soon have cause to regret it. The word gets around. And in a few short weeks the physician will find his reception room filled with patients presenting vague illnesses, each requiring narcotics. Such circumstances are not only embarrassing, but are usually difficult to explain when the Narcotics Bureau makes its inevitable investigation.

Physical Previously, we mentioned that the physical exam. may not prove addiction. A physical examination, how-

ever, works as a remarkable deterrent to the addict. When you suggest it, the "patient" may suddenly remember a pressing appointment elsewhere and ask to be excused.

If he is a user and will submit to examination, certain signs may be present and thus a tentative diagnosis can be made.

Needle Marks, Induration The most obvious indication is the presence of needle marks, both new and old, usually antecubital, deltoid, abdominal, anterior thigh, or along easily accessible veins. The addict who uses methadone or meperidine is likely to have indurated or inflammatory areas in the deltoid or anterior thigh areas.

It is well to remember, however, that these same signs are sometimes present in legitimate patients such as diabetics or severe allergics who must reply on frequent injections.

The differential point is that rarely would the legitimate patient have these signs to the same degree as does the addict. Almost without exception, the patient's injections are given by a second party under sterile conditions.

The addict does not enjoy such luxury.

He usually dissolves his narcotic in tap water heated in an old spoon. He employs an eyedropper and needle because it's easy to use with one hand.

He may strain his solution from cotton hastily ripped from anywhere handy, not excluding the tongue of his shoe. Then, after tying a tourniquet around one arm, he jabs at the most accessible vein. After five or six attempts, he finally hits home and injects.

This is a precious hole. He knows it won't last long because the vein will in time thrombose. He therefore uses

it as long as possible until the whole area is covered with needle marks.

The addict is an inadequate marksman when it comes to veins. Despite his experience, he is usually shaky and anxious to get relief and his aim is poor. And a heavy user may repeat this multiple-jab process as frequently as every two or three hours.

Miosis may appear in the morphine addict, but it should be remembered that tolerance to this drug occurs as addiction progresses. As has been pointed out by the A.M.A. Council on Pharmacy and Chemistry, no physical findings may be present other than the fake symptoms detailed by the narcotic-seeking addict.

Cocaine or marihuana habitues seldom present a problem to the physician except in diagnosis, because these drugs are not physically addicting.

Pain Relief In situations where transients are involved, and the physician has to the best of his ability checked the patient and diagnosed the problem as one needing pain relief, he should feel justified in treating his patient. An addict with a broken leg is just as entitled to analgesia as is a non addict. The decision rests with the physician.

Regular Check Overprescribing for fatal illness is another source of professional grief. Commissioner Anslinger has reported a case of one physician who in good faith gave a weekly prescription for narcotics to one of his incurable cancer patients who lived some twenty miles away. Since he did not see this patient at regular intervals, it was not until he was approached by a narcotics agent that he learned of the death of this patient some eleven months before. Meanwhile, the patient's niece had discovered and perpetuated a lucra-

tive little racket of selling the narcotics to addicts at a marked up price.

Occasionally, an addict who wishes to withdraw will present himself to a physician for private treatment. Although the physician may treat a hospitalized addict without reporting him to law enforcement officials, he will save himself much time and grief if he does not attempt to do so.

Treatment of an ambulatory patient, while not illegal, is most unsatisfactory and leads in a short time to personal disappointment and discomfort. In addition, the process is considered unethical by the A.M.A. and is frowned upon by the Bureau. The only safe procedure is to refer the addict to a hospital recognized by the state as having facilities to treat addiction. One good reason for this is that the addict often neglects to continue his treatment once the source of narcotics reaches a point of diminishing returns. He then disappears, leaving the physician to explain why he gave narcotics to a known addict. By this time the addict has attached himself to another unsuspecting physician.

Source of Supply In dealing with this problem it is well to remember that the physician sees only an occasional addict and thus is unfamiliar with his habits. The addict who uses physicians as a less expensive source of supply, however, contacts many physicians over a short period of time. The routine of a medical office is familiar to him. Finding a sympathetic doctor (who thinks he is "treating" the addict), the user merely milks his source. The doctor unwittingly is a supplier of narcotics for the perpetuation of a habit, a process which the Supreme Court has declared illegal.

Object of Investigation The question is often asked, "How do physicians become objects of investigation by the Federal Narcotics Bureau?" The suspicion that all physicians are beset by undercover agents looking for a mishap has no validity. If for no other reason, the small number of narcotics agents would preclude this activity.

The few physicians who are investigated usually fall heir to this procedure for one of two reasons.

Each copy of the triplicate form used by the physician to purchase narcotics for his professional use is reviewed by an officer of the Bureau before it is filed. If a doctor is purchasing unusually large quantities of narcotics, or is purchasing them at frequent intervals, the agent knows one of three things is happening. He is either selling them, using them himself, or dispensing them too freely.

In the former two instances he will be watched until adequate information has been gathered to proceed further. In the latter instance, he will be advised that it is better to write prescriptions for his patients rather than to go through the trouble of keeping a record of so many tablets. Patients who have an incurable disease requiring frequent quantities of drugs should have their prescriptions marked "Exc. I, Art. 85." In this way the Bureau is aware of the distribution of the narcotics.

Pharmacy The second source of investigation comes from the appearance of an increase in narcotics ordered by local pharmacies. Normally, pharmacies do not keep large stocks of narcotics. Their supply is enlarged only when there is an increase in demand. It is in checking these prescriptions that the Bureau becomes aware of prescrip-

tions bearing fictitious names, heavy prescribing and other deviations. These cases are checked to their original source. The physician found involved is inevitably in real trouble.

In a leaflet "Narcotics Don'ts for the Physician," the Treasury Department issues some additional advice. It is most inadvisable to carry large supplies of narcotics either in the office or in one's bag. Addicts have a way of discovering this, and physical violence may result from their frantic attempts to obtain the narcotics.

It is unwise to dispense any narcotics without keeping a record, even though bedside and office administrations are permitted without individual record.

The pharmacist who calls to verify information about a narcotic prescription is not only protecting himself but is guarding the physician against the possibility of forged or incorrectly written prescriptions.

Never resent or reproach the pharmacist when he fulfills this obligation.

Information The Bureau of Narcotics, as well as all other law enforcement agencies, will willingly offer advice and information to any physician who will take the precaution of calling them. All information is confidential, and often a brief phone call can save weeks of troubled sleep.

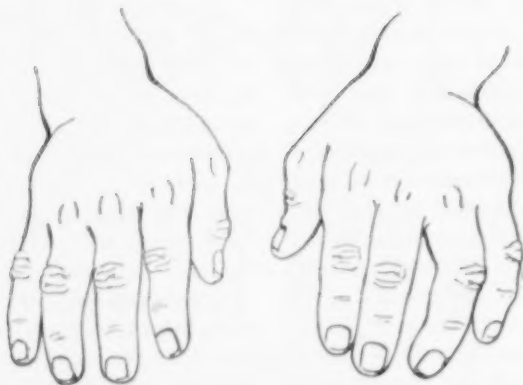
One final rule, which if followed will prevent almost all of the discomforts experienced by doctors who prescribe narcotics. These drugs should be issued only to known bona fide patients for specific medical purposes and preferably should be prescribed in small quantities at each visit. Physicians following this simple dictum will seldom have reason to worry about their relationship with the Harrison Narcotic Law.

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12. Narcotic Don'ts For the Physician, Treasury Department, Bureau of Narcotics, Washington, D. C.

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Clini-Clipping



Pulmonary osteo-arthropathy

Investing For The Successful Physician

Prepared especially for Medical Times by C. Norman Stabler,
market analyst of "The New York Herald Tribune."

PROJECTS GROWTH OF MUTUAL FUNDS

Investment companies started their major growth in the late 1930's but even at the close of 1940 their total net assets were only \$448,000,000. That looks like a picayune amount, judged by present standards, but at that time it was regarded as quite impressive.

Sixteen years later, at the close of 1956, their total assets had climbed to a staggering \$9,046,321,000. Should we be impressed?

We gather not, from recent comments made by Emerson W. Axe, economist and president of the Axe-Houghton mutual funds. Four years from now he thinks total net assets will top \$20,000,000,000 and that there will be 4,000,000 shareholders using this popular form of investment.

In support of his forecast he notes that assets have practically doubled

every three and a half years since 1941, a rate of growth not equalled by other forms of investment or savings, and indeed equalled or surpassed by few other industries.



C. Norman Stabler

"In the decade which ended December 31, 1955," he said, "the net assets of all mutual funds in the United States multiplied 6.1 times. In the same period, savings and loan associations increased their assets 4.4 times, life insurance companies doubled their reserves, mutual savings banks increased their assets 1.8 times and commercial bank time deposits increased 1.5 times.

"A continuance of this rate of increase should enable the mutual funds to reach the \$20 billion-mark in total net assets by the end of 1960.

"The number of mutual fund shareholders in the United States," he said,

"has increased from 296,000 on December 31, 1940, to 2,518,049 on December 31, 1956. It has tended to double every year since 1941."

These totals, he explained, do not allow for duplications—"and it is a

well-known fact that many shareholders own shares in more than one fund."

"Net assets per shareholder have also increased sharply," said Mr. Axe—"from \$1,513 on December 31, 1940, to \$3,593 on December 31, 1956. . . ."

REPORTS FROM FUND MANAGERS

Massachusetts Investors Trust, oldest mutual investment company, had "another year of progress and substantial all-around accomplishment" during 1956 with total net assets on December 31 of \$1,098,594,429 and 159,414 shareholders holding 94,476,155 shares outstanding, the Trustees stated in the annual report for the year ended December 31, 1956. All figures represent new year-end highs.

The poor price action of electronics and electrical equipment stocks suggests a buying opportunity for long-term

growth, according to Distributors Group, Inc., sponsors of Electronics and Electrical Equipment Shares of Group Securities, Inc. The same organization believes today's attractive yields and prices justify a "new look at the old-fashioned virtues of bond investment."

Keystone Growth Fund K-2 had a 15.4% increase in capital value for the fiscal year ended December 31, 1956, and reached new highs in net assets, number of shareholders, and shares outstanding. Net assets jumped more than \$6 million to \$26,819,563, while 2,670

Guide For Investors

Based on recommendations of the Securities and Exchange Commission in cooperation with the New York Stock Exchange, American Stock Exchange, National Association of Securities Dealers and others.

1. Think before buying, guard against all high pressure sales.
2. Beware of promises of quick spectacular price rises.
3. Be sure you understand the risk of loss as well as the prospect of gain.
4. Get the facts—do not buy on tips or rumors.
5. Give at least as much thought when purchasing securities as you would when acquiring any valuable property.
6. Be skeptical of securities offered on the telephone from any firm or salesman you do not know.
7. Request the person offering securities over the phone to mail you written information about the corporation, its operations, net profit, management, financial position and future prospects. Save all such information for future reference.

	AVERAGE		MARKET	
	COST	COST	VALUE	MARKET
81,000 Island Creek Coal Co.	39%	\$ 3,207,825	\$ 4,363,875	53%
100,000 North American Coal Corp.	18%	1,864,000	1,937,500	19%
121,303 Pittsburgh Cons. Coal*	19%	2,338,077	5,519,292	45½
50,000 Pittston Company	48%	2,415,623	3,400,000	68
16,100 Pittston Co. \$3.50 conv. pfd.	55%	894,646	1,449,000	90
90,000 Truax-Traer Coal Co.	29½	2,636,457	2,913,750	32½
67,000 United Electric Coal Cos.	24	1,607,388	2,160,750	32¼
60,000 West Kentucky Coal Co.	31½	1,893,539	2,340,000	39
		<hr/>	<hr/>	
		\$16,857,555	\$24,084,167	

* Partially acquired prior to 1956

new shareholders brought the total number of participants to 11,346. They held a total of 2,105,183 shares at year end, up approximately 301,000 from 1955.

Net assets of Whitehall Fund, Inc., increased to \$7,942,047 at year end, a record reported high for the balanced mutual fund. The figure was a gain of 11% over \$7,124,420 a year earlier, according to Francis F. Randolph, chairman of the board and president.

He also announced that asset value per share of National Investors Corporation increased to \$9.86 at the end of 1956, up about 9% from \$9.06 a year earlier. The increase amounted to about 15% when the record December 1956 distribution of 55 cents a share from taxable gain on investments is taken into account. Net assets of Broad Street Investing Corporation rose to \$94,518,508 at the end of 1956, a record reported high for the 27-year-old diversified mutual fund. The figure was 16% greater than the \$81,646,781 at the close of 1955.

Directors of Group Securities, Inc., declared dividends from net investment income of more than \$1,100,000 for the first quarter of the current fiscal year,

ended February 28, an increase of about 5% over last year's payments for the same period, according to Herbert R. Anderson, Group's president. This, the 93rd consecutive payment, brings total dividends since the company's inception to more than \$48,000,000.

Century Shares Trust, oldest and largest mutual investment company specializing in insurance company and bank stocks, reports total net assets of \$47,097,030 at the close of its twenty-ninth year, equivalent to \$22.05 per share on 2,136,291 outstanding shares.

Total net assets of three Axe-Houghton mutual funds rose \$12,245,998 or more than 11 per cent in 1956, according to figures released by the management.

Incorporated Investors, following a study of the revival in the coal industry, took a substantial position in the stocks of coal companies early in 1956, and by January 1, 1957, had 9 per cent of the fund's portfolios in this industry, as follows:

Sales of Selected American Shares, Inc., in the year 1956 rose to \$12,704,311, the largest volume recorded for any year in the 24-year history of the fund,

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and an increase of 52.4% from sales of \$8,335,944 in 1955, according to Harry L. Sebel, president of the fund's sponsor.

Frank Altschul, chairman, reports that General American Investors Co., Inc., on December 31, 1956, had net assets of \$66,542,455. The increase for the year in the net assets, after payment of \$4,642,115 in dividends and \$197,900 for Preferred Stock purchased for retirement, was \$5,257,833. Net assets, after deducting \$5,795,000 Preferred Stock, were equal to \$33.74 per share of Common Stock on the 1,800,220 shares outstanding.

Net asset value per share of Diversified Growth Stock Fund, Inc. was \$12.73 at the fiscal year-end on December 31, 1956 compared with \$11.52 a year earlier. This is an increase of 16.5% in share value for the year, adjusted for the security profits distributions of 69c per share declared on December 31, 1956. For the same period, total net assets of the Fund increased \$2,395,543 to a year-end figure of \$15,273,789.

New England Fund, for the year 1956, paid dividends from net investment income of 80c per share, the largest amount ever paid from this source in its history. The 1955 total was 78c per share.

FUND FAVORITES IN '56

Oil stock led all categories in the order of investment preference during 1956, a study of the portfolios of twenty of the largest mutual funds, conducted by "Forbes" magazine shows. In fact their popularity increased proportionately, as they accounted to 16.7 per cent of all common stocks compared with 14.8 per cent a year earlier.

MEDICAL TIMES

Buyers' Choice

Here is how the investment managers of 20 large funds spread their investments over common stocks in major industry groups last year.

	1956		1955	
	% of Common Stocks Held	Rank	% of Common Stocks Held	Rank
Oils	16.7	1	14.8	1
Public Utilities (incl. telephone)	9.6	2	10.3	2
Financial (incl. banks & insur.)	9.0	3	9.6	3
Steel	5.9	4	5.9	6
Chemicals	5.8	5	6.5	4
Metals & Mining	5.4	6	4.7	7
Railroad	5.3	7	6.2	5
Paper	4.2	8	4.4	8
Natural Gas	3.7	9	3.1	11
Bldg. Materials	3.6	10	2.9	12

Utility shares, including the telephones, held second place but their percentage dropped slightly, and stocks of financial institutions, including banks and insurance companies, were third, also down a trifle.

The magazine's complete breakdown of preferences for 1956 and 1955, on a percentage basis, is shown in the chart above.

SYSTEMATIC WITHDRAWAL ACCOUNT

Sponsors of the investment company industry maintain there is a mutual fund to fill every desire. They believe that on their shelves they have just the right bundle for your needs, with the correct mixture of speculative and conservative stocks and bonds, and the right emphasis on income and growth.

They also have various suggestions for regular purchases of their wares, so

(Vol. 85, No. 3) March 1957

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that the investor may plan wisely for his future. They are as adept with their graphs of the future as is the life insurance industry.

Hugh W. Long & Co., national underwriters of Fundamental Investors, Inc. and three other funds, recently announced what it calls the "Systematic Withdrawal Account," designed for those who wish to spend a certain amount of investment principal along with dividends, in order to meet their financial requirements. It is a service designed for retired persons.

The "Withdrawal Account" is created through a custody agreement between the individual and The First National Bank of Jersey City under which the Bank pays out income and the proceeds from liquidation of mutual fund

investments over whatever period of years the individual selects. The period can be any specified number of years, or may be extended for the investor's lifetime. Amounts paid out depend primarily on three things—the dollar total of the mutual fund investments placed in the Account, changes in value of these shares month by month over the years and the length of time during which payments are to be made.

Up to now, the principal emphasis in providing special service facilities to investors has been on the planned accumulation of investments. According to Mr. Long, "This new service concerns itself with planned liquidation of investments—a necessity for . . . people whose investments are not large enough to produce income adequate for their purpose."

VALUE LINE'S COMMENTS ON VALUES

In 1950, when The Value Line Fund, Inc. was incorporated, it held a fully invested common stock position. This fund is one of those directed by Arnold Bernhard, president, who, in the last few years, has come to regard a large portion of the stock market as overvalued.

So it is not surprising to note in the fund's annual report, that as against the fully invested common stock position the fund currently has 36.4 per cent of its capital in short-term bonds, 8.3 per cent in high grade long-term bonds, 7.2

per cent in high grade preferreds, and 2.3 per cent in high grade fire and casualty insurance stocks.

"High grade common stocks, in the Managers' judgment, are generally overpriced at this time (Jan. 30, 1957) relative to bonds and preferreds," Mr. Bernhard observed. "On the other hand, business continues generally good and the extent of any trade recession in 1957 is expected to be of small proportions. A number of interesting opportunities may be found in carefully selected special situations, the Managers think."

"With these judgments in mind, the Fund has taken a defensive position in short-term bonds to protect against the risk of a general market decline, while it holds high grade, long-term bonds and preferreds to provide current income, and a selection of special situations to

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A Physician

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give the Fund representation in industries and companies that, in the Managers' judgment, could advance in 1957 despite a possible business recession and a lower stock market in general.

"Should high grade common stocks again become undervalued as they were in 1949 and 1950, it would be the policy of the Managers to switch from bonds back into stocks again."

MUTUAL FUND OWNERS SLOW TO LIQUIDATE

When the individual who has saved some money invests it in one of the various media that are available, among them being bonds, stocks, mortgages, savings banks and real estate, one of the questions he asks himself concerns the liquidity. In other words, should the necessity arise, how easily and how quickly could he take his money out.

Stocks are probably somewhere along about the middle in the table of degrees of liquidity, being far more salable on quick notice than real estate, yet not as near to ready cash as a savings account or a government bond.

Obviously much depends upon the stock in question. Those in which an active market is maintained, either on one of the big Stock Exchanges or in the over-the-counter market, are normally as liquid as a government bond. Unless the seller is offering an unusually large block of these prime securities, he can take his money out with ease. It is somewhat more difficult, and price concessions doubtless would be larger, in the case of inactive stocks in which the market is narrow.

This brings up a consideration of one of the fears expressed in financial circles back in the 1930's and early 1940's when open-end investment companies started their impressive growth. (The first one was formed in 1924, but the growth was relatively slow until after the 1929 panic).

Especially in Stock Exchange circles there were experienced traders and investors who wondered whether it was a good thing for the economy to have great blocks of stock deposited with these funds, which blocks would have to be liquidated promptly should the holders of the mutual funds become frightened, and demand their money back at once.

Even back in 1947 and 1948, when the total assets held by mutual funds was small compared with today's sum, a real scare, it was held, could conceivably bring onto the market the liquidation of half a billion dollars worth of prime stocks, and just at the time when the market was least able to accommodate the sellers. It was argued this would accelerate the decline and could contribute to another panic.

It was held that as many of the holders of mutual funds are relatively inexperienced in the ways of finance, they would become frightened more easily than would the more sophisticated banker or business man.

A warning went around, couched in various words, but all with the theme that: Some of these days someone is going to yell "fire," and there won't be enough exits.

No one expects any conflagration such as we had back in 1929 and the early thirties, but there have been several occasions in the last few years when we



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The stocks that have had the best 12-year growth record—like MIN. NESOTA MINING & MFG. with a Growth Index of 99 (meaning that it grew more rapidly than 98% of all stocks.)

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have had smolderings, and a few flames. There have been many things to shake investor confidence.

To list a few, we are not too long out of a world war and we have seen too many other smaller international conflicts every year or so since; we have been in a cold war for so long we are beginning to look upon it as a normal way of life; virtually every one of our major industries has been tied up at one time or another by strikes, there has been a running battle throughout the world between the forces of inflation and those individuals in each country who are trying to stop it through the management of money and credit, and twice the stock market tumbled because of the condition of the health of our President. This is a partial list. Many other times there has been smoke, and a little fire.

Who was it rushed for the exits? In the long bull market since 1949, there have been a dozen or more times of heavy selling, a few of them severe. Someone wanted to get out, and quickly.

It was not the investors in mutual funds. On the contrary, this relatively new group of investors, about whom we were warned back in the 1930's, turned out to be far less subject to fright than the others.

There is statistical evidence to support this statement. It was compiled by the National Association of Investment companies. Much of the data was secured at the request of the United States Senate Banking and Currency Committee.

It centered about a study of the volume of new purchases of mutual funds as contrasted with the volume of redemptions by former mutual fund investors. An excess of purchases over

redemptions would seem to indicate greater overall confidence; an excess of redemptions might indicate a decline in confidence, although there are other factors which could persuade an individual to liquidate. Perhaps he redeemed his shares because he had completed an investing plan he adopted some years previously; possibly he had a sudden need for money that could not have been foreseen.

Be that as it may, the data collected for the Senate Committee indicates that even in periods of stress, stock price fluctuations failed to disturb the long-term plans of mutual fund investors.

Companies representing 74.3 per cent of the Association's open-end membership participated in the survey. They provided data for three periods of six months each—May through October, 1946; January through June, 1949 and April through September, 1953.

In each month of the three periods, investors purchased substantially more mutual fund shares than they redeemed, even though common stock prices generally were declining. In the 1946 period, between May and November, when the Dow-Jones Industrial Average declined by 18.2%, investor purchases of new mutual fund shares were \$98.8 million, while redemptions of shares outstanding totalled only \$38.7 million. In the first six months of 1949, with the Dow-Jones Average off 5.6%, investor purchases of mutual fund shares were \$133 million and redemptions were \$24.7 million; figures for purchases and redemptions were \$228.4 and \$60.2 million respectively during the third period studied, from April 1 through September 30, 1953, when the Dow-Jones Average declined 15.8 points, or 5.7%.

These new figures confirm previous

Association studies of mutual fund investor activities in shorter periods of abrupt price drop. One such study was made in January, 1955 during which the drop in the Dow-Jones Industrial Average reached a maximum of 5.1%, and mutual fund new share sales of \$105.9 million exceeded by \$59.6 million the months redemptions of \$46.3 million. A similar survey was conducted in the week following the President's heart attack in 1955. At that time investors purchased mutual fund shares with a value of \$22.5 million while redemptions were \$10.1 million, even though the Dow-Jones Average was off 4.3%.

FUND REDEMPTIONS LOW IN 1956

In addition to the data collected for the Senate Committee the Association also made a study of total redemptions last year by holders of open end funds. As in other years these represented a smaller percentage of liquidation than that represented by other selling on the New York Stock Exchange. Indeed the percentage turned in by shareholders of the mutual funds was smaller than for any year since such compilations were started in 1940. In this connection we should remember that 1956 was not a particularly bountiful year for the common stock purchaser, at least as compared with the six preceding years, and it was much easier to become disappointed.

Investors among the Association's 135 open-end member companies redeemed \$433,000,000 of holdings last year, representing only 4.8 per cent of year-end assets of \$9,000,000,000. This compares with a redemption ratio of 5.6 per cent

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in 1955, 6.5 per cent in 1954 and 5.0 per cent in 1952, the previous low year.

This 4.8 per cent redemption rate for

mutual fund investors compares with 13.7 per cent for all stocks listed on the New York Stock Exchange.

SEES BOOM SHOWING AGE

In looking ahead throughout the balance of this year, one cannot fail to be impressed with an array of unfavorable factors in the economy, in the opinion of Calvin Bullock, Ltd., investment company underwriters.

Bullock sees the current boom as "growing old," but also notes there is a lack of "speculative fever" such as char-

acterized "all the major booms of the past."

The nation's industrial capacity has almost overtaken demand, the firm observed in a recent study, and in many instances the outlook is not for higher profits but for reduced demand or more narrow profit margins.

The significance of this development

RECENT COMPANY ANALYSES

The following is a selected list of analyses recently issued by financial firms on various companies and industries:

COMPANY	FIRM	N. Y. ADDRESS
United States Rubber Co.	Fahnestock & Co.	30 Rockefeller Plaza
Clark Equipment Co.	Fahnestock & Co.	30 Rockefeller Plaza
Automobiles, steels and building Ventures, Ltd.	Hayden, Stone & Co.	25 Broad St.
Timken Roller Bearing	Hayden, Stone & Co.	25 Broad St.
Armstrong Cork Co.	Dreyfus & Co.	50 Broadway
Illinois Central Railroad	Harris, Upham & Co.	120 Broadway
Koppers Co.	Bache & Co.	36 Wall Street
Louisville & Nashville RR	Bache & Co.	36 Wall Street
Federal Paper Board Co.	Blair & Co.	44 Wall Street
International Nickel Co.	Blair & Co.	44 Wall Street
Gimbel Bros.	Blair & Co.	44 Wall Street
Allied Laboratories	J. R. Williston & Co.	115 Broadway
Interlake Iron Co.	Reynolds & Co.	120 Broadway
	Eastman Dillon, Union Securities & Co.	15 Broad Street
Food Fair Stores, Inc.	Eastman Dillon, Union Securities & Co.	15 Broad Street
Union Bag-Camp Paper	Thomson & McKinnon	11 Wall St.
National Distillers	Thomson & McKinnon	11 Wall St.
Cooper Bessemer	Paine, Webber, Jackson & Curtis	25 Broad St.
Railroad Stocks	Shearson, Hammil & Co.	14 Wall St.
A. O. Smith	Green, Ellis & Anderson	61 Broadway
The Pfaunder Co.	J. Roy Prosser & Co.	11 Broadway

lies not so much in the fact that industries have constructed sufficient capacity to produce normal surplus, but its possible effect upon capital expansion plans for business, since this type of spending has been such a stimulant to the economy over the past year.

It predicted that capital expenditures will begin to decline from their record peaks later this year.

Consumer expenditures cannot be expected to add any "dynamic" impetus to the economy this year, it said. Heavy consumer debt, the repayment of which now takes one-eighth of all disposable income, will make the auto industry's "relatively modest" 1957 sales goal of 6.5 million cars "not easy to achieve."

However, the report said there are several basic elements of strength in the economy which should cushion any downturn. Among these, it pointed out, the government has the power to move against a recession with not only monetary weapons, but also can bring into play heavier public works expenditures.

NATIONAL SECURITIES APPRAISES STEEL OUTLOOK

Many of the more optimistic forecasts prevalent three months ago have been shaded. One reason is the automobile outlook, and what it may mean to the steel industry. There have been reports, in and out of the press, that the latter is in danger of an important decline in production and earning power.

In an effort to make a realistic appraisal of the situation, Henry J. Simonson jr., President of National Securities & Research Corporation, which manages the \$300,000,000 National Securi-

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ties Series, recently contacted representative leaders in both industries and concluded there is nothing in the situation to warrant pessimistic estimates on 1957 prospects.

If the rate of sale of new cars reported by dealers early in January should continue for the balance of the year, public purchases for the entire year would amount to 6,500,000 cars and production of about 6,700,000, or 10 per cent above 1956 totals, he estimated. His report indicated a strong growth in public preference for lower-priced models, with sales in the middle priced units somewhat slower than expected. This has caused a revision in production schedules.

Predictions of steel ingot production of about 120,000,000 tons in 1957, voiced around the beginning of the year, are now being shaded to the 115 million to 117 million ton range. For all of 1956, such output amounted to about 115.2 million tons, the second largest year on record, so production at about this figure would represent one of the best years in the industry's history.

Steel buying by automotive companies, bolstered in early 1956 by possibilities of a steel strike and a major price increase, is now being more closely geared to actual car output, his report states. Due to reduced pressures for steel inventory accumulation and shifting model trends within the automotive

industry itself, there has been some tendency to defer deliveries of automobile steel for one or two months. From all available indications, however, outright cancellations have been small, as the auto manufacturers want to be sure their steel on order will be available when needed.

To bring changes in automotive demand for steel into better perspective, it should be noted that the average passenger car uses less than two tons of steel. Any reduction in passenger car production even to the extent of 500 thousand units, therefore would affect finished steel consumption by less than one million tons. This represents only about 1.1% of total finished steel shipments at the level prevailing in 1956. This seems to be overlooked in many adverse comments, Mr. Simonson adds.

The study concludes with the observation that "auto production only consumed about 17½ per cent of steel production in 1956. The other 82½ per cent is spread over many industries, of which construction, shipbuilding, railroad car building, roadbuilding, pipe and tubes for the oil and gas industries are very promising and for which the demand is expected to continue at a high level throughout 1957.

Current indications are that 1957 earnings of the major integrated steel producers will, in the aggregate, exceed those of 1956, and the same applies to the major auto companies.

THE MISSILE INDUSTRY

Last year the United States spent \$1,200,000,000 on guided missiles. It seeks to spend \$2,000,000,000 this year and by 1965, or even earlier, the budget

for this dealer of death and destruction is projected at five to seven billion dollars a year.

That makes it a big industry—hor-

rible but huge. The government and private industry already have an estimated \$6,000,000,000 invested in guided missile plants and production, and there are more than 100,000 employed in various phases of the work.

Several Wall Street firms are keeping tabs on the investment possibilities of this new industry. Troster, Singer & Co. recently issued an analysis on the subject and observed, among other things, that the ratio of expenditures for planes vs. guided missiles is now roughly 5½ to 1, but pointing toward 4 to 1 in the relatively near future.

The firm noted that recently some wags called attention to the disappearance of one of our "misguided" missiles, the winged Snark, which flew 3,000 miles and crashed presumably in some unknown part of the Brazilian jungle. However, this was but one poor performance in a great many. Last December the Army left unchallenged a report that one of its missiles "soared to an altitude of 650 miles and traveled 3,300 miles at a rate of 15,000 miles an hour." Obviously the land of space is closer to Main Street now than ever before. Yet for all our research, we are not too far from the 1915 rocket conclusions of Dr. Robert H. Goddard, the original "moon rocket man," the inventor of the "Bazooka" and one of the greatest pioneers in rocket research.

"The problem apparently is more one of engineering than theory," the Troster, Singer survey says. It reminds us:

That "one million working parts of watch-like precision are needed to hurl this weapon 5,000 miles through space at 15-17,000 m/p/h with an accuracy that allows for only a .002 error."

That the frightening aspects of this weapon is that a near-miss of 2/10 of

(Vol. 85, No. 3) March 1957



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1% or 10 miles (in a congested area) might still be lethal.

That 80% of the cost of such a missile will be in electronic devices within its shell.

That the metals for this shell must be of super alloy construction to withstand extremely high temperatures and strain . . . "for the thrust developed by some rocket engines (the size of a sports car) have a horsepower equal to the total output of Hoover Dam."

That (to be a bit more far-fetched) "Man will soon be able to fly in a rocket from New York to Los Angeles in 45 minutes . . .", "rockets similar to guided missiles will carry humans to the moon and back within 25 years" . . . "that within 10-15 years, the U.S. may launch earth-circling satellites with living quarters for 80 scientists."

That this last could also mean (besides the military advantage of being able to observe enemy moves anywhere on earth) we would thus get a closer peek at the most precious secrets of the universe.

The firm of Merrill Lynch, Pierce, Fenner & Beane, in its publication "Investor's Reader," has a comprehensive discussion of guided missiles and outer space, and the companies involved. The missile program involves nearly all major aircraft, electronic, engine and rocket companies, it says, and literally thousands of subcontractors and specialists.

The list of companies with some of their activities on the route into space, is shown below and on pages 116a and 118a. This does not include all that are participating in one manner or another.

THE MISSILE INDUSTRY

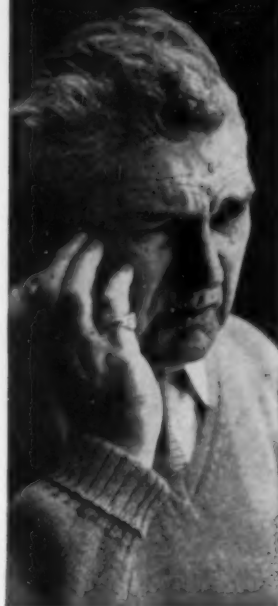
Company	Some Activities
ACF INDUSTRIES	Equipment for Corporal
AEROJET-GENERAL	Both solid & liquid rockets; second-stage propulsion for Vanguard; development of ICBM powerplant; powerplant or booster for many other missiles
AMERICAN BOSCH ARMA	Development contract for Atlas ICBM guidance
AMER MACH & FOUNDRY	Launchers, accessory power supplies, ground checkout equipment
AYCO MANUFACTURING	ICBM nose cone research; Falcon components
AMERICAN TELEPHONE	Bell Labs & Western Elec; Nike prime contractor; ICBM guidance
BALDWIN-LIMA-HAMILTON	Vanguard firing and launching platform
BEECH AIRCRAFT	Developing Navy drone
BELL AIRCRAFT	Rascal (air-surface), including powerplant; electronic work
BENDIX AVIATION	Builds Talos; electronics for Terrier
BOEING AIRPLANE	Bomarc surface-air interceptor missile
BROOKS & PERKINS	Magnesium shell for earth satellite

fatigue

memory lapses

muscular pain

depression



for middle-age slowdown

Plestran is indicated as an aid in restoration of vigor in middle-aged or elderly patients who complain of chronic fatigue...reduced vitality...low physical reserve...impaired work capacity...depression...muscular aches and pains...or cold intolerance. Such "signs of aging," far from being due to physiologic disturbances, may often result from endocrine imbalance, especially gonadal and thyroid dysfunction.¹⁻⁴ Plestran provides ethinyl estradiol (0.005 mg.); methyltestosterone (2.5 mg.); and Proloid® (¼ gr.)—hormones which help to correct endocrine imbalance and often halt or reverse involutional and degenerative changes.¹⁻⁴

Plestran restores work capacity and a sense of well-being, usually within 7 to 10 days. It improves nitrogen balance, leads to better muscle tone and vigor, enhances mental alertness,

*Purified thyroid globulin

helps to correct osteoporosis, senile skin and hair texture changes and relieves muscular pain.

The anabolic and tonic effects of the hormones in Plestran appear to be enhanced by combination so that small dosages are very effective. Combination also overcomes some of the disadvantages of therapy with a single sex hormone, such as virilization, feminization or withdrawal bleeding.⁵

Dosage: Usually one tablet daily; occasional patients may require two tablets daily, depending on clinical response.

Supplied in bottles of 100 and 500.

References: 1. McGavack, T. H.: *Geriatrics* 5:151 (May-June) 1950. 2. Masters, W. H.: *Obst. & Gynec.* 8:61 (July) 1956. 3. Kimble, S. T., and Stieglitz, E. J.: *Geriatrics* 7:20 (Jan.-Feb.) 1952. 4. Kountz, W. H., and Chieffi, M.: *Geriatrics* 2:344 (Nov.-Dec.) 1947. 5. Birnberg, C. H., and Kurczok, R.: *J. Am. Geriatrics Soc.* 3:656 (Sept.) 1955.

PLESTRAN

TRADEMARK


a metabolic regulator

WARNER-CHILCOTT

100 YEARS OF SERVICE TO THE MEDICAL PROFESSION

THE MISSILE INDUSTRY

Company	Some Activities
BURROUGHS CORP	Participates in ICBM guidance program
CHANCE VUGHT	Regulus for Navy; production starts on Regulus II
CHRYSLER	Redstone, Jupiter
CLARY CORP	Controls used on Navaho, Corporal, others
CURTISS-WRIGHT	Dart anti-tank missile; ramjets for Navaho; Hypersonic Test Vehicle (reaches 5000 mph speed in two seconds)
DOUGLAS AIRCRAFT DYNAMICS CORP	Nike; Sparrow; Thor; Ding-Dong; Honest John Radar equip for South Atlantic missiles range
EASTMAN KODAK EMERSON ELECTRIC	Reportedly working on air-surface Dove Army Honest John; research & dev on Little John
FAIRCHILD ENGINE FIRESTONE	Petrel air-underwater missile; midjet jet for Firebee, etc Corporal
FRUEHAUF TRAILER	Launching equip for Matador
GENERAL DYNAMICS GENERAL ELECTRIC	Convair Atlas ICBM; Terrier; Tartar X405 first-stage Vanguard rocket; ICBM guidance and nose cone development; second source for Sidewinder
GENERAL MILLS GENERAL MOTORS	Mechanical Division handles missiles work Allison jets for Matador, Regulus; AC Spark Plug guidance components for Matador; ICBM guidance dev
GILFILLAN BROTHERS GOODYEAR TIRE	Guidance system for Corporal ATRAN guidance system for Matador
GRAND CENTRAL ROCKET	Big in solid rockets; third-stage Vanguard; rocket for Dart
HERCULES POWDER HUGHES AIRCRAFT	Rocket for Honest John, Little John; Nike booster Falcon air-air missile
IBM	Vanguard data reduction; control systems
INTERNATIONAL TELEPHONE	Internal guidance for Talos; subcontractor for Rascal, Sparrow, Terrier, Bomarc
LITTON INDUSTRIES LOCKHEED AIRCRAFT	Inertial guidance research X-17 research vehicle; ICBM nose cone dev
MARQUARDT AIRCRAFT	Ramjet engines for Bomarc; part of OMAR team with Olin Mathieson and Reaction Motors
MARTIN (GLENN L)	Prime contractor for Vanguard satellite; Titan ICBM; Bullpup



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LIPO GANTRISIN

'Roche'

For round-the-clock therapy

With two doses a day

Lipo Gantrisin 'Roche'—a new, palatable liquid for antibacterial therapy—offers three significant features:

1. Only two doses a day needed in most cases
2. Adequate twelve-hour blood levels after a single dose
3. Same therapeutic advantages as Gantrisin 'Roche'

Lipo Gantrisin® Acetyl—brand of acetyl sulfoxazole in vegetable oil emulsion

THE MISSILE INDUSTRY

Company	Some Activities
MCDONNELL AIRCRAFT	Talos airframe and ramjet engine; Triton
MINNEAPOLIS-HONEYWELL	Guidance reference system for Vanguard; ICBM guidance dev
MOTOROLA	Controls for Terrier, Corporal, Bomarc, Regulus, Jupiter
NORTH AMERICAN AVIATION	Navaho long-range missile; Rocketdyne div makes liquid rockets "for all the biggest missiles;" electronics div big in inertial guidance
NORTHERN ORDNANCE INC	Launching equip for Terrier on new, smaller ship
NORTHROP AIRCRAFT	Snark; also working on low-cost drone; missile checkout facility
OLIN-MATHIESON	Rocket fuels
PERKINS-ELMER	Optical tracing devices to help track research missiles
PHILCO	Sidewinder; second source for Falcon
PHILLIPS PETROLEUM	Branched from rocket fuel into rocket engine
RCA	Talos launching installation; missile test project at Patrick AFB
RAMO-WOOLDRIDGE	Overall responsibility for ICBM and IRBM
RAYTHEON MANUFACTURING	Prime contractor Sparrow III; Hawk
REACTION MOTORS	Liquid rocket engines; combined with Olin rocket fuels, Marquardt ramjets, makes well-rounded OMAR team
REPUBLIC AVIATION	Terrapin research missile
REYNOLDS METALS	"Hardware" for Redstone
RYAN AERONAUTICAL	Firebee drone; liquid rocket for Corporal
SOLAR AIRCRAFT	Falcon fuselages
SPERRY RAND	Sparrow; Redstone, Jupiter guidance; Terrier shipboard control; RACE missile test system
SYLVANIA ELECTRIC	Waltham Labs reportedly working on ICBM detection device
TEMCO AIRCRAFT	XKDT-1 rocket-propelled target drone for Navy
THIOLKOL CHEMICAL	Rocket engines for Falcon, Lacrosse; Matador booster
UNITED AIRCRAFT	J57 jet for Snark; Hamilton Standard major supplier of Nike components
US STEEL	Consolidated Western Steel powerplant metal parts for Little John; Nike parts
US TIME CORP	Tiny gyroscopes for missiles
VARIAN ASSOCIATES	Special purpose tubes



will her arms be filled this time?

Improper maternal environment is often the cause of fetal loss. To help create an optimal environment for the maintenance of pregnancy, Nugestoral® supplies five agents now known to contribute to fetal salvage. A dose of three Nugestoral tablets per day throughout gestation will help bring your abortion-prone patients to term.

new for the abortion-prone patient

NUGESTORAL

Each tablet contains ethisterone (Progesterone®), 15 mg.; hesperidin complex, 175 mg.; ascorbic acid, 175 mg.; sodium menadiol diphosphate (vitamin K analogue), 2.0 mg.; dl. alpha-tocopherol acetate, 3.5 mg. In packages of 30 tablets.

ORGANON INC.

Orange, New Jersey

NUGESTORAL®

*for the abortion-prone patient helps create
an optimal maternal environment with:*

Ethisterone (Progesterone¹)

Of renewed importance in the prevention of abortion,¹⁻⁴ luteal hormone prepares the uterus for implantation and maintenance of the conceptus. Its specific uterine relaxant action reduces the excessive uterine irritability so often found in habitual aborters. Ethisterone is the orally effective form of luteal hormone.

Hesperidin and Vitamin C

Capillary permeability and fragility may be involved in habitual abortion.⁵⁻⁹ Since bioflavonoids, particularly hesperidin, acting conjointly with vitamin C, foster capillary integrity, these agents have been employed in habitual aborters to protect decidual vessels, with high fetal salvage as a result.⁶⁻⁸

Vitamin K

The value of vitamin K during pregnancy to prevent bleeding tendencies in both mother and infant is long-established. In addition, it appears that vitamin K may be of value in habitual aborters,^{6,10,11} to prevent frequently encountered hemorrhagic diathesis,⁷ particularly if membranes rupture prematurely or cervix obliterates and dilates early.¹²


Vitamin E

Alpha-tocopherol is considered by many obstetricians to be part of the standard therapeutic regimen for poor-risk obstetrical patients, as an extra precaution which has often proven of value. Alpha-tocopherol acetate, particularly, has been credited with improving fetal salvage in many nutritionally inadequate women.^{13,14}

To Help Preserve Pregnancy In the Abortion-Prone Patient

NUGESTORAL®

ORGANON INC. Orange, New Jersey

- 
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SYNDROX®

Hydrochloride

Sulfamonomethoxine Hydrochloride, McNeil

Syndrox has a way of putting "backbone" into the obese patient. First it curbs the desire for food, so that a moderate meal satisfies.

for the patient who is all flesh
and no will power...SYNDROX
helps the patient in spite of himself

Then the euphoriant nature of Syndrox gives a lighter, brighter look to life—toning down the psychic urge to over-indulge.

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chronic infectious dermatitis

in this skin disorder
and many more

NEW Vioform- Hydrocortisone Cream

antibacterial
antifungal
anti-inflammatory
antipruritic

SUPPLIED: Vioform-Hydrocortisone Cream,
containing Iodochlorhydroxyquin U.S.P. 3%
and hydrocortisone (free alcohol) U.S.P. 1%
in a water-washable base; tubes of 5 and 20 Gm.
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famous Anton Herr
Pottery Works in
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Suitable as collectors items, for
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satisfactory. Write for full color
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DEFINITION OF TERMS

Every business and profession has its own language. Wall Street is no exception. Various words seen frequently in the financial press are defined here.

LIFO and FIFO. Bookkeeping terms, applied to the valuation of inventory. The first means "last in, first out" and the second, "first in, first out." Inventory valuation is important because it is a major determinant in figuring the cost of a sale, and hence the amount of profit. The majority of companies use FIFO, because the first goods moved into inventory are likely to be the first moved out. In a period of rising prices the first inventory was probably purchased at a relatively low figure, so the cost of the sale also is low and the net profit correspondingly higher. This, in turn, means a higher tax on corporate profits. By changing its method to LIFO a company can revalue its inventory on the basis of the cost of the last purchased. Thus the cost of a sale increases, the net profit decreases, and so does the tax. It makes the earnings statement look poorer than otherwise would be the case, but helps the company conserve cash.

Prudent Man Law. A provision, in effect in a large number of states, which authorizes trustees and other fiduciaries to invest funds in common and preferred stocks of corporations that are listed on national securities exchanges. The assumption is the trustees will exercise due prudence, and most states circumscribe their respective prudent man laws by placing definite restrictions on the exercise of the right.

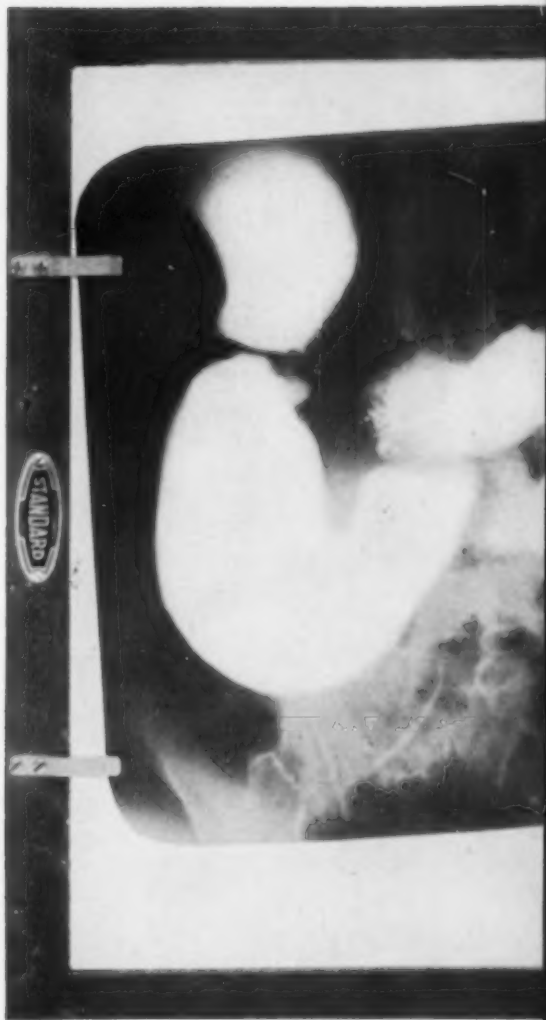
Scaling. Trading in securities or commodities by placing orders at regular price intervals instead of placing the entire order all at once.

... part of every *illness*

ANXIETY

is part of

PEPTIC ULCER



Equanil[®]
MEPROBAMATE
(2-methyl-2-n-propyl-1,3-propanediol dicarbamate)
Licensed under U.S. Pat. No. 2,724,720


anti-anxiety factor with muscle-relaxing action

*In every patient . . .
a valuable adjunct
to the customary therapy*

Supplied: Tablets, 400 mg., bottles of 50.
Usual Dose: 1 tablet, t.i.d.



Philadelphia 1, Pa.



shrinks
the
appetite

without making
the patient "jumpy"

Curbs excessive desire
for food
Eases bulk hunger
Reduces nervous-tension
hunger

BONTRIL

DOSAGE: 1 or 2 tablets upon arising and at 11 A.M. and at 4 P.M.
SUPPLIED: White, scored tablets in bottles of 100 and 1000.
Each Bontril Tablet contains:
Dextro-amphetamine sulfate 5 mg.
Butabarbital sodium 10 mg.
Methylcellulose 350 mg.

CARNRICK G. W. Carnrick Company,
55 Pleasant Ave., Newark, N. J.

122a

MODERN THERAPEUTICS

Gas Sterilization of Crystalline Substances

Gas sterilization, using formaldehyde or ethylene oxide, could not be relied upon to sterilize internally contaminated crystalline substances, according to Abbott, Cockton and Jones in *J. Pharm. Pharmacol.* [8:409 (1956)]. The authors showed that spores of *B. subtilis* were trapped within crystals prepared from contaminated mother liquors. Electron micrographs showed spore-like objects on the surfaces of fractured crystals. Following exposure to formaldehyde gas, externally contaminated crystals were found to have remained contaminated in only 1.8 per cent of the crystals. Internally contaminated crystals, on the other hand, remained contaminated in 90.2 per cent of the crystals following exposure to the gas.

Transital, a Short-acting Anesthetic

From Victoria, Australia, J. E. Williams [*Medical Journal of Australia*, 2:441 (1956)] reports on a short-acting intravenous anesthetic. Transital, a creamy-yellow powder, has an alkaline reaction in an aqueous solution. It was discovered that for maximum efficacy the ten per cent solution must be made up immediately prior to its use; and it should be administered as fast as is rea-

—Continued on page 124a

MEDICAL TIMES

NEW

for your Rheumatoid Arthritis patient

for the pain of the present
for the fear of the future

the original
tranquilizer-
corticoid

Ataraxoid*

prednisolone and hydroxyzine

provides the anti-rheumatic,
anti-inflammatory action of the most
effective steroid, STERANE,[®] complemented by
the superior central tranquilizing effects of
ATARAX.[®] Minimal disturbance of fluid and
electrolyte metabolism; no mental fogging
or major toxicity in ataractic action.

FOR UNMATCHED RESPONSE AND
MANAGEMENT IN RHEUMATOID ARTHRITIS...
AS IN OTHER COLLAGEN DISEASES, BRONCHIAL
ASTHMA, INFLAMMATORY DERMATOSES.

Supplied: Each green, scored
ATARAXOID Tablet contains 5 mg. prednisolone
(STERANE) and 10 mg. hydroxyzine hydro-
chloride (ATARAX). Bottles of 30 and 100.

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Pfizer

Trademark



MODERN THERAPEUTICS

—Continued from page 122a

sonable. An average of two to three minutes of anesthesia may be expected. Eighty-eight patients were given Transital for such procedures as cystoscopy (initial passing of the instrument), shock therapy, incision of abscesses, manipulations (of short duration), dental extractions, and induction of anesthesia in very ill patients. There was a fall in blood pressure of 10 to 20 millimeters of mercury which had returned to normal by the time the patient was ready to leave the operating room. A depression of respiration soon returned to normal without in any instance causing laryngeal spasm. The patients were able to talk sensibly after five minutes, and were able to walk unaided after 15

minutes. The author points out that this observation of Transital, while satisfactory and without untoward side-effects, is only preliminary, and should receive further and more complete investigation. Even though there has been no occasion for their use, necessary equipment for dealing with possible emergencies should always be at hand.

Promethazine Hydrochloride for the Treatment of Enterobiasis

Infestation by the pinworm, *Enterobius vermicularis*, is the most widely distributed human helminthic disease; there being an estimated 18 million cases in the United States and Canada. Warm, or cool moist regions are most favorable for development of the ova which, however, may occur anywhere. Also, while most prevalent in the crowded areas of the groups of low economic status, members of the higher income brackets are not immune. The author, J. L. Avery of Maryland [*Journal of the American*

—Continued on page 126a

impetiginized eczema

in this skin disorder
and many more

NEW Vioform- Hydrocortisone Cream

antibacterial
antifungal
anti-inflammatory
antipruritic

SUPPLIED: Vioform-Hydrocortisone Cream, containing iodochlorhydroxyquin U.S.P. 3% and hydrocortisone (free alcohol) U.S.P. 1% in a water-washable base; tubes of 5 and 22 Gm. VIOFORM® (iodochlorhydroxyquin U.S.P. CIBA)

C I B A Summit, N. J. 07901

Diagnosis, Please!

ANSWER

(from page 25a)

CARCINOMA OF THE PANCREATIC HEAD

Note widening of the duodenal loop with pressure indentures on the greater curvature of the stomach and on the inner concave border of the duodenum. There is no spasm, irritability nor intolerance to the barium.

ACHROCIDIN is indicated for prompt control of undifferentiated upper respiratory infections in the presence of questionable middle ear, pulmonary, nephritic, or rheumatic signs; during respiratory epidemics; when bacterial complications are observed or expected from the patient's history.

Early potent therapy is provided against such threatening complications as sinusitis, adenitis, otitis, pneumonitis, lung abscess, nephritis, or rheumatic states.

Included in this versatile formula are recommended components for rapid relief of debilitating and annoying cold symptoms.

Adult dosage for ACHROCIDIN Tablets and new, caffeine-free ACHROCIDIN Syrup is two tablets or teaspoonfuls of syrup three or four times daily. Dosage for children according to weight and age.

Available on prescription only

*symptomatic
relief... plus!*

ACHROCIDIN^{*}

TETRACYCLINE-ANTIHISTAMINE-ANALGESIC COMPOUND

*Tablets
and
Syrup*

Each tablet contains:

ACHROMYCIN® Tetracycline	125 mg.
Phenacetin	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

^{*}Trademark



LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK



MODERN THERAPEUTICS

—Continued from page 124a

Medical Association, 161:681 (1956)], studied the effect of promethazine hydrochloride (Phenergan) when administered to 100 adults and children infested by *E. vermicularis*. At bedtime a single dose of ten 12.5 mg. tablets was given. Results were based upon continuous negative post-treatment anal swabs which were first used ten days after administration of the drug and repeated daily for ten times. Of the group treated, 97 per cent were rendered free of *E. vermicularis*. Untoward reactions did not occur even in the case of a man who inadvertently doubled the

—Continued on page 128a

contact dermatitis

in this skin disorder
and many more

NEW Vioform® Hydrocortisone Cream

antibacterial
antifungal
anti-inflammatory
antipruritic

SUPPLIED: Vioform-Hydrocortisone Cream, containing iodochlorhydroxyquin U.S.P. 3% and hydrocortisone (free alcohol) U.S.P. 1% in a water-washable base; tubes of 5 and 20 Gm.

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C I B A Summary 11, No. J. 27073100

Through The Menstrual Years of Life-

THE frequency with which the menstrual life of so many women is marred by functional aberrations that pass the borderline of physiologic limits, emphasizes the importance of an effective uterine tonic and regulator in the practicing physician's armamentarium.

In ERGOAPIOL (Smith) with SAVIN the action of all the alkaloids of ergot (prepared by hydro-alcoholic extraction) is synergistically enhanced by the presence of apiol and oil of savin. Its sustained tonic action on the uterus provides welcome relief by helping to induce local hyperemia, stimulating smooth, rhythmic uterine contractions and serving as a potent hemostatic agent to control excessive bleeding.

May we send you a copy of the booklet "Menstrual Disorders", available with our compliments to physicians on request.

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ERGOAPIOL^(SMITH) with SAVIN

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to restore appetite and promote weight gain

R_x LACTOFORT[®]

L-lysine + vitamins + minerals

this baby needs help

If he turns his back on food, the infant can neither gain weight nor grow properly.

Efficient protein synthesis requires all the essential amino acids, simultaneously, in the correct proportions.

But many foods in the infant diet are relatively deficient in lysine, compared with meat protein.

Supplied: In 46 Gm. bottles with special Lactofort measuring spoon enclosed.

Persistent anorexia calls for nutritional support with Lactofort

This complete nutritional supplement helps to restore normal growth and perk up lazy appetites in infants with anorexia and impaired nutrition. It supplies physiologic amounts of L-lysine to raise the biological value of milk and cereal to that of high-quality animal protein. In addition, Lactofort provides generous amounts of iron, calcium and all the essential vitamins.

Reference: Williamson, M. B., in Albanese, A. A., et al.: New York State J. Med. 55:3453, 1955.

a dry powder . . . stable . . . odorless . . . tasteless . . . readily soluble

first with lysine



WHITE LABORATORIES, INC. • Kenilworth, New Jersey

MODERN THERAPEUTICS

—Continued from page 126a

dose. Sleep was disturbed in a few of the children, probably from the drug, but the effects were mild. Nightmares are the third most frequent symptom of *E. vermicularis* infestation. Several months after the initial treatment, anal swabs again indicated infestation in several patients, but these were believed to be cases of reinfection. The extreme difficulty of ridding living quarters of viable eggs is a serious problem in pinworm control. Autoinfection further complicates the situation. For these reasons, all members of a group are routinely treated every four months. Promethazine appears to afford satisfactory, inexpensive, nontoxic, one-dose treatment for the eradication of pinworms.

Reserpine in the Treatment of Chronically Ill Mental Patients

Chronically ill mental patients who require close supervision are a growing problem in mental institutions. Reports on the use of reserpine (Serpasil) for this type of patient led the author, L. Koltonow of the Pontiac State Hospital, Michigan, [*Journal of Nervous and Mental Disease*, 123:392(1956)], to study the drug's performance on a group of 82 patients who had been hospitalized from two to eight years. The majority of the group had been diagnosed as having schizophrenia of the paranoid type. The patients were divided; one-half of them were given a placebo and the other half received Serpasil orally, administered in varying dosages for varying periods. The study lasted for five and one-half months. Patients, at-

—Continued on page 130a



For NERVOUS indigestion ... and G-I SPASM

Convertin-H fortifies the important gastric and pancreatic enzymes for efficient digestion of proteins, fats, and carbohydrates.

Convertin-H® tablets

Fortified digestive enzymes

WITH ANTISPASMODIC

COMPOSITION: Each Convertin-H tablet contains:

In sugar-coated outer layer	2.5 mg.
Homatropine Methylbromide	
Betaine Hydrochloride	130.0 mg.
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Pancreatin (4 X U.S.P.)	62.5 mg.
(equiv. to Pancreatin U.S.P. 250 mg.)	
Desoxycholic Acid	50.0 mg.

DOSE: One or two tablets with or just after meals.

SUPPLIED: In bottles of 84 and 500 tablets.

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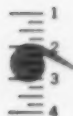
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Trademark

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MODERN THERAPEUTICS

—Continued from page 128a

tendants and physicians were interviewed frequently and their impressions recorded. During the study, certain general observations were made: after three weeks of treatment and 3 mg. of reserpine daily, the patients seemed "more forceful" but fewer fights occurred. At the seventh week and 4 mg. of reserpine, food consumption doubled, and there were more fights but of less intensity. At the ninth week, on 5 mg. per day, clinical Parkinsonism developed in five patients, but was easily controlled. By the eleventh week, on the same dosage, a distinct increase in sociability was noted, even among patients who had not

spoken in years. Fights decreased in number, and the general behavior was much improved. Of the patients who had received Serpasil, 24 were improved, 16 were unchanged, and one was worse. Among those taking the placebo, two were improved, 35 were unchanged, and two were worse. According to disorder, patients showing improvement were: paranoid schizophrenics, 50 per cent; all catatonics, all simple schizophrenics, and three of four hebephrenics. Side-effects were flushing, agitation, aching and stiffness of the legs and tremor, and swelling of the face. All disappeared when the drug was decreased in amount or stopped. One apparent manifestation of the therapy deserves mention. The attendant sometimes designated the patient's status as worse because he be-

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Raynaud's disease

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ischemic ulcers
night leg cramps

arlidin® HCl

brand of nylidrin hydrochloride
tablets 6 mg.

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came more restless, more talkative and more of a nuisance. As the study progressed, however, these proved to be the first signs of improvement; the patient was coming out of the schizophrenic autism and reentering the world of reality.

Prednisone in the Treatment of Bronchial Asthma

S. J. Taub and his co-workers of Chicago [*Journal of Allergy*, 27:514 (1956)] undertook a clinical study of prednisone administered to 153 patients suffering from severe bronchial asthma. The patients were considered in three groups, i.e., those hospitalized for status asthmaticus, patients with acute asthma, and those with chronic asthma. Patients with status asthmaticus were treated with

routine control measures; prednisone therapy was instituted when acute symptoms had subsided. Additional drugs were required especially in the group of patients with chronic asthma due to long-standing complications and sequelae. Prednisone was administered initially in six doses of 5 mg. each over a period varying from 24 to 48 hours. Then for several days (from three to seven) 20 to 30 mg. were given daily, after which a maintenance dosage of 5 to 15 mg. of Meticorten daily was continued for an indefinite period. Results in general of this study indicated that prednisone is more potent than other agents, and that the duration of effectiveness lasted from six to twelve hours and sometimes longer. Side-

—Continued on following page

**vasorelaxation
more tissue oxygen
improved muscle metabolism
pain relief
safe • rapid • sustained**

walk longer, farther, in more comfort



ARLIDIN dilates peripheral blood vessels in distressed muscles, relaxes spasm, increases both cardiac and peripheral blood flow . . . to send more blood where more blood is needed.

"safe vasodilative agent of minimal toxicity and optimal tolerance"

1. Pomerance, J. et al. *Anaesth.*, June, 1955.
2. Freedman, L. *Anaesth.* 6:52, Feb. 1955.

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MODERN THERAPEUTICS

—Continued from preceding page

effects seldom materialized unless the daily dosage of prednisone exceeded 30 mg., or was used over a prolonged period. These consisted, for the most part, in a gain in weight, epigastric distress, hypertension and irritability. In the group of patients with status asthmaticus, all patients had complete or partial relief. Of 81 patients with acute asthma, 29 were completely relieved, 49 were partially relieved, and three were not benefited. Among the chronic sufferers, 14 were completely relieved, 31 had partial relief, and four were not improved. In a grouping of the results, it was shown that the patients who were completely relieved (30.7 per cent) were

—Continued on page 134a

varicose and indolent ulcers

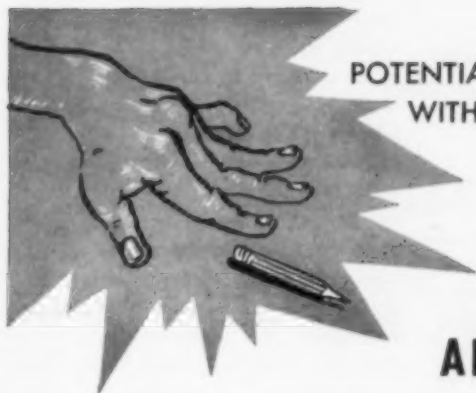
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MODERN THERAPEUTICS

—Continued from page 132a

continued on the usual allergic management without recurrence. The 64.7 per cent of patients in whom partial remission was achieved were carried along on a maintenance dose of prednisone, with an occasion injection of ACTH, and routine allergic management. With this high percentage of beneficial results, the authors consider prednisone to be a material advancement in the armamentarium of drugs for allergic disease, especially bronchial asthma.

Severe Pain Treated with Dipipanone Hydrochloride

R. O. Gillhespy and his associates of Birmingham (England) [*British Medi-*

cal Journal, 2:1094(1956)] conducted a study using dipipanone hydrochloride as an analgesic to find out if this agent could be used with fewer untoward reactions. Two groups of 100 patients each were given the drug. In Group 1, were patients admitted to the medical wards with pain whose relief required a potent analgesic; in Group 2, were postoperative gynecologic cases, the latter being chosen because of severe postoperative pain experienced, and the higher than normal incidence of thrombo-embolism. All administration was subcutaneous; no local reaction or pain at the site of injection occurred. In Group 1, 25 mg. was found to cause a certain number of side-effects, but 20-mg. doses were well tolerated. The drug was given at eight-hour intervals. In Group 2, 25-mg. doses were given at six-hour intervals for the first 48 hours.

—Continued on page 142a

for dermatitis
complicated or threatened
by secondary bacterial
invasion

NEO-MAGNACORT*

neomycin and ethamicort TOPICAL OINTMENT

unique topical steroid-antibiotic combining
the first water-soluble
dermatologic corticoid

MAGNACORT® (brand of ethamicort)
500 times as soluble as hydrocortisone, and
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Supplied: in 1, 2 oz. and 1, 6 oz. tubes, 0.5% neomycin sulfate
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- Free from tendencies to disturb digestion. (One-tenth as irritating to the gastric mucosa as ferrous sulfate.)
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Iron peptonized	0.42 Gm.
(Equiv. in elemental iron to 71 mg.)	
Manganese citrate, soluble	0.158 Gm.
Thiamine hydrochloride	10 mg.
Riboflavin	10 mg.
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(Vitamin B ₁₂ activity)	20 mcg.
Niacinamide	50 mg.
Pyridoxine hydrochloride	1 mg.
Pantothenic acid	5 mg.
Liver fraction I	2 Gm.
Rice bran extract	1 Gm.
Inositol	30 mg.
Choline	60 mg.

*Keith, J.H.: Utilization and Toxicity of Peptonized Iron and Ferrous Sulfate. Read before the American Association for the Advancement of Science, Atlanta, Georgia, December, 1955

The S. E. MASSENGILL Company

Bristol, Tennessee

New York

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end of the trail for old-time villains



In times past, the long-awaited debut of an infant upon life's stage was sometimes marred by the entrance of as beady-eyed, black-hearted villains as ever lurked in shadowy wings.

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"... by far the most effective

and useful orally administered agent for reducing blood pressure... fully worthy of a trial in every case of essential hypertension in which treatment is thought necessary. The severe cases, which always need treatment, are as likely to respond as the mild."¹

1. Locket, B.: Brit. M.J.
1:809 (Apr. 2) 1955.

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"... relief from anxiety resulted in generally increased intellectual and psychomotor efficiency with a few exceptions."² Rauwiloid is outstanding for its *nonsoporific* sedative action in a long list of diseases burdened by psychic overlay.

2. Wright, W.T., Jr., et al.: J. Kansas
M. Soc. 57:410 (July) 1956.

Dosage: Merely two 2 mg. tablets at bedtime.
After full effect one tablet suffices.

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In severe, otherwise intractable hypertension this single-tablet combination provides smoother, less erratic response to hexamethonium. Each tablet contains 1 mg. Rauwiloid and 250 mg. hexamethonium chloride dihydrate. Initial dose, $\frac{1}{2}$ tablet q.i.d.

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PANPARNIT also produces gratifying relief of tremor.

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*Schwab, R. S., and Leigh, D.,
J.A.M.A. 139:629, 1949.

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*between the hazards of high steroid dosage
and the frustration of inadequate relief*

Because of the complementary action of cortisone and the salicylates, Salcort produces a greater therapeutic response with lower dosage.

One study concludes: "Salicylate potentiates the greatly reduced amount of cortisone present so that its full effect is brought out without evoking undesirable side reactions."¹

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indications:

Rheumatoid arthritis . . . Rheumatoid spondylitis . . . Rheumatic fever . . . Neuromuscular affections.

¹Busse, E.A.: Treatment of Rheumatoid Arthritis by a Combination of Cortisone and Salicylates. Clinical Med. 11:1105.

each tablet contains:

Cortisone acetate	2.5 mg.
Sodium salicylate	0.3 Gm.
Aluminum hydroxide gel, dried	0.12 Gm.
Calcium ascorbate (equivalent to 50 mg. ascorbic acid)	60.0 mg.
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*U.S. Pat. 2,691,662

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MODERN THERAPEUTICS

—Continued from page 134a

Response to dipipanone hydrochloride was rapid. In the medical cases, maximum analgesic action was reached within one-half hour. In the surgical cases, relief was experienced within ten to twenty minutes. The relief, in most instances, lasted about five hours. In Group 1, 67 patients enjoyed complete relief from pain; 27 obtained moderate relief, and three only slight benefit. In Group 2, 95 patients obtained complete relief, four patients moderate relief, and one patient slight benefit. Side-effects consisting of headache, sweating, giddiness, nausea and vomiting occurred in four per cent of Group 1 patients, and in five per cent of patients in Group 2. In only one instance the drug was dis-

—Continued on page 144a

infantile eczema

in this skin disorder
and many more

NEW Vioform-[®] Hydrocortisone Cream

antibacterial
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I. Tompkins, W. T.: In *Modern Nutrition in Health and Disease*, ed. by Wuhl, M. W. and Goodhart, R. S., Lea & Febiger, Philadelphia, 1955, p. 885.



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MODERN THERAPEUTICS

—Continued from page 142a

continued. At no time did a patient exhibit respiratory depression, change in blood pressure or pulse rate. Dipipnone appeared to have very little hypnotic effect; the patients were awake and completely cooperative as soon as the anesthetic had worn off.

Quinidine in the Treatment of Auricular Fibrillation

The significance of auricular fibrillation in connection with the functioning of the heart has been a matter of diversified opinion for many years. Treatment of this condition with quinidine is not new, but numerous factors concerning its use are not completely understood. Therefore, the authors, R. Freidberg and B. Sjoestrom of the Sundby Hospital [*Acta Medica Scandinavica*, 155:293 (1956)], undertook a further study, selecting 133 medical patients admitted over a three-year period. Dosage was begun with three 10-centigram tablets given four times daily, increased gradually until the pulse rhythm was regularized, then given for an additional five days. If a normal pulse rhythm was not obtained within 15 days, treatment was discontinued. Also, the maximum dose did not exceed two grams daily. In the group, 46 patients regained normal pulse rhythm. That this proportion is

—Continued on page 146a

WHO IS THIS DOCTOR?

(from page 47a)

Anton Chekhov



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Kapseals

comprehensive physiologic supplement



each Kapseal contains:

VITAMINS

Vitamin A	1,567 Units (0.5 mg.)
Vitamin B ₁ mononitrate	0.67 mg.
Ascorbic acid	33.3 mg.
Nicotinamide	16.7 mg.
Vitamin B ₂	0.67 mg.
Vitamin B ₆	0.5 mg.
Vitamin B ₁₂ with intrinsic factor concentrate	0.035 USP Unit (ent)
Folic acid	0.1 mg.
Choline bitartrate	8.67 mg.
Pantothenic acid (as the sodium salt)	5 mg.

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Ferrous sulfate (anhydrous)	16.7 mg.
Iodine (as potassium iodide)	0.05 mg.
Calcium carbonate	66.7 mg.

DIGESTIVE ENZYMES

Yaka-Diastase®	20 mg.
Pancreatin	133.3 mg.

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L-Lysine monohydrochloride	66.7 mg.
DL-Methionine	16.7 mg.

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Methyl testosterone	1.67 mg.
Theelin	0.167 mg.

DOSAGE:

One Kapseal three times daily before meals.

Female patients should follow each 21-day course with a 7-day rest interval.

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to help patients to approach later life with increased physical and mental well-being

- vitamins and minerals to help maintain cellular function
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Kaufman, W.: The Use of Vitamin Therapy to Reverse Certain Concomitants of Aging, *J. Am. Geriatrics Soc.* 3:927, 1955.



PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN



MODERN THERAPEUTICS

—Continued from page 144a

lower than other statements may be accounted for by the fact that none of the patients was under 40 years of age, and that 89 were women. The response to quinidine is twice as high in male patients. Side-effects, noted by 60 persons, were dyspepsia, exanthema, hemorrhagic diathesis, conduction defects, and embolic manifestations; medication had to be reduced or stopped. In cases of dyspepsia, remedial control is preferable to decreasing the quinidine dosage. In general, patients with oversize hearts

—Continued on page 148a

anogenital pruritus

in this skin disorder
and many more

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antibacterial
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*Trade Mark, Patent Pending I. Gould, W. L.: Impotence, M. Times 84:302 (March) 1956.

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Natalins-PF are formulated
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Just one to three capsules daily,
according to need,
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iron and calcium in pregnancy.

For some patients, you may
prefer to prescribe Natalins®
which contain *both* calcium
and phosphorus.

MEAD JOHNSON

SYMBOL OF SERVICE IN MEDICINE

MODERN THERAPEUTICS

—Continued from page 146a

are more susceptible to complications. Sixteen patients died during the course of treatment; in nine cases, quinidine appeared to have been a factor, but in no instance was the amount of the drug used nor the duration of treatment related to the fatal course of the disease. Quinidine was apparently more effective when the duration of the heart disease was shorter, but this does not imply that the drug should be avoided in cases of long duration. There is possible danger in cases where the patients show many ventricular extrasystoles, pronounced arborization block or recent embolic manifestations. The physician will weigh hazards of treatment against haz-

ards of the disease. However, when chronic auricular fibrillation is seriously endangering the heart function and thus the life of the patient, treatment with quinidine would seem to be the method of choice.

Surgical Infections Treated with Novobiocin

Novobiocin (Cathomycin) is one of the newer antibiotics that has been found to be effective against most strains of gram-positive bacteria, but ineffective against most gram-negative bacilli tested. The drug has been found to be extremely effective in vitro against most strains of streptococci and staphylococci, and especially, in the case of the latter, against those resistant to other

—Continued on page 150a

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you too will
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for monilial vaginitis

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for sound infant nutrition



Philadelphia 1, Pa.

MODERN THERAPEUTICS

—Continued from page 148a

antibiotics. A. M. Rutenburg and his co-workers of Boston [*New England Journal of Medicine*, 255:325(1956)] conducted a study of the effects of novobiocin when administered to 30 patients with a variety of surgical infections. Twenty-three members of the group had failed to respond to previous antibiotic therapy, and seven had received no previous medication. The drug was given orally in an initial dose of 1 gm., and 1.0-1.5 gm. in divided doses daily thereafter. Most patients received 0.25 gm.

every six hours; treatment lasted for ten days. Of the present group, and 60 other patients having received novobiocin, only two individuals reported side-effects, and these were in the form of mild gastrointestinal disturbances. Twenty-eight of the patients experienced rapid and progressive improvement within 48 hours. Local and systemic evidence of infection subsided, drainage from the infected wounds decreased and became sterile with subsequent healing. Extensive involvement in the other two patients included irradicable carcinoma and osteomyelitis with inadequate peripheral circulation. The authors believe that novobiocin represents an effective

—Continued on page 154a

EFFECTIVE TREATMENT AND PREVENTION OF Diaper Rash

Diaparene® Chloride Ointment 93% effective in the treatment of ammonia dermatitis. The case illustrated cleared in 4 days.

J. Niedelman, M. L. and Bleier, A.; *Jrnl. Ped.* 37:762, 1950.



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Gantrimycin

'ROCHE'

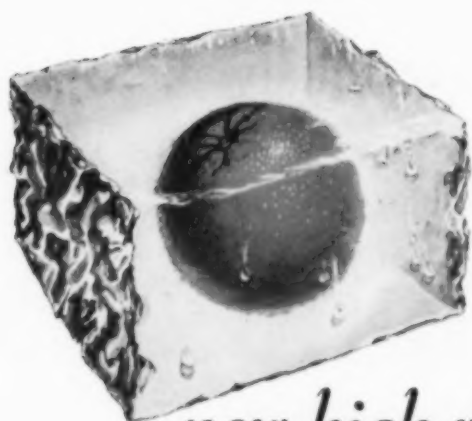
Why is Gantrimycin so effective?
Because it provides Gantrisin plus
oleandomycin (a new antibiotic)
which mutually reinforce each other;
and there is a high degree of
safety plus a pronounced effect
on most pathogens resistant
to other antibiotics.

The double-spectrum action of
Gantrimycin is valuable against
both gram-positive and gram-negative
microorganisms.

Each blue Gantrimycin tablet
contains 333 mg Gantrisin and
75 mg oleandomycin.

Gantrisin®; Gantrimycin™

HOFFMANN-LA ROCHE INC.
Nutley 10 • New Jersey



new high values for frozen citrus

Recent assays by the Wisconsin Alumni Research Foundation¹ reveal frozen citrus juices significantly higher in vitamin C than shown by the latest U.S.D.A. Handbook (No. 8, 1950), with orange juice averaging 20% higher... further proof it is the "nutritive equal"² of fresh juice. Recommended Daily Allowances for vitamin C as provided by frozen citrus juices are shown below.

	Reconstituted frozen orange juice	Reconstituted frozen grapefruit juice
75 mg.—normal adults	5 fl. oz.	6½ fl. oz.
100 mg.—late adolescence or pregnancy	7 fl. oz.	8½ fl. oz.
30 mg.—infants to 1 year of age	4¼ tablespoonfuls	

Florida Citrus Commission, Lakeland, Florida



1. J. Agr. & Food Chem. 4:418, 1956.

2. A.M.A., Council on Foods & Nutrition: J.A.M.A. 146:35, 1951.

orally...intravenously

palliative of choice

in prostatic carcinoma

Stilphostrol®

Diethylstilbestrol Diphosphate, AMES

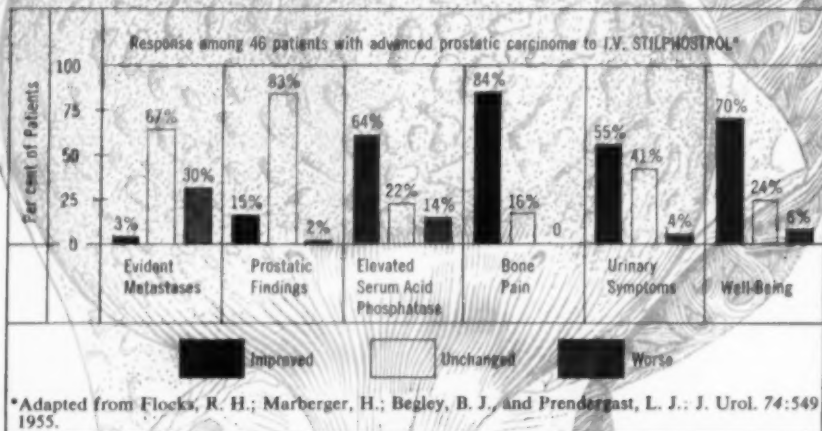
Tablets • Ampuls

Initially or as maintenance after I.V. therapy, well-tolerated STILPHOSTROL Tablets relieve pain and increase well-being in nonhospitalized as well as hospitalized patients. Palliative action is often obtainable even in patients no longer responding to other estrogens.

See your 1957 P.D.R. for oral and intravenous dosage and administration, or write for literature.

Packaging: STILPHOSTROL Tablets, diethylstilbestrol diphosphate 50 mg., bottles of 50.

STILPHOSTROL Ampuls, 5 cc., containing diethylstilbestrol diphosphate 0.25 Gm. as a solution of the sodium salt, boxes of 20.



AMES COMPANY, INC. • ELKHART, INDIANA

WHEN YOU TREAT CORYZA....

TREAT THE NASAL INFECTION, TOO...

Specific for the "cold" season with . . .

"more than mere symptomatic relief . . ."¹

Biomydrin®

NASAL SPRAY

Penetration makes the difference . . .

Whenever colds, infection or allergy congest the nasal passages or sinuses, Biomydrin offers prompt relief. The mucolytic action of Biomydrin enables it to reach the site of nasal infection promptly. Within minutes symptoms are relieved.

*• mucolytic
penetrating
antibacterial
antiallergic
decongestive*

Formula

Thonzonium bromide	0.05%
Neomycin sulfate	0.1%
Gramicidin	0.005%
Thonzylamine HCl	1.0%
Phenylephrine HCl	0.25%

Supplied: 0.5 oz. plastic atomizer or dropper bottle (yellow cap).

When added anti-inflammatory action is desired, Rx Biomydrin® F—with hydrocortisone alcohol 0.02%, ½ oz. plastic atomizer (red cap).

1. Lazar, A. M., and Goldin, M.: Eye, Ear, Nose and Throat Monthly 32:512, 1953.

NEPERA CHEMICAL CO., INC.



Pharmaceutical Manufacturers

Nepera Park, Yonkers 2, N. Y.

6-1120-M

MODERN THERAPEUTICS

—Continued from page 150a

addition to the antibiotic armamentarium. The drug when administered orally is rapidly absorbed, and yields blood levels that appear to be adequate for the inhibition of bacterial growth.

Atarax in the Treatment of Anxiety

In a group of business executives, laborers and housewives suffering from the anxiety and tension caused by physical and mental stress conditions encountered in everyday life, Atarax has provided "peace of mind" for 76 of 100, according to Dr. Milton Ende, [*Virginia Medical Monthly*, Nov 1956], of Petersburg, Va.

The physician found that Atarax (hydroxyzine) effectively relieved anxiety and tension in 76 per cent of the cases studied, including patients who suffered organic diseases combined with anxiety. These diseases included heart ailments, hypertension, arteriosclerosis and diabetes.

Atarax was administered in 10 or 25 mg. tablets, with dosage of 20 mg. to 100 mg. daily. Patients ranged in age from 20 to 80 years.

No side effects were encountered in this study. Psychotic patients and patients with depression, melancholia and hysteria did not benefit from Atarax therapy, according to Dr. Ende.

Fluothane

According to a report in the *British Medical Journal* [2:969(1956) R.

NOW... doubly-high antibiotic blood lev

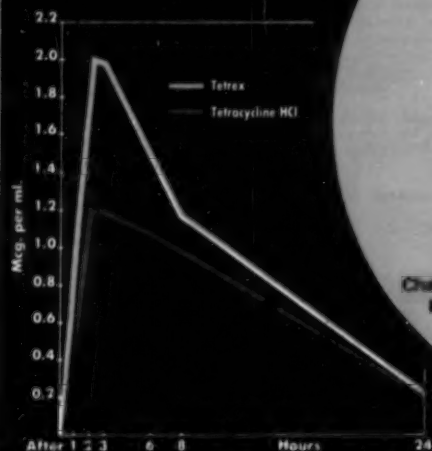


Chart (left) shows
blood levels practically
double with Tetrax

— from 5 independent studies by
P. A. Blum, M.D., Sol Katz, M.D.,
and G. A. Cronk, M.D., on 188 patients

Tet

TETRACYCL

BLOOD LEVELS AFTER SINGLE DOSE

Bryce-Smith & H. D. O'Brien], Fluothane, a new volatile anesthetic, is the most promising member of a series of agents with non-flammable and non-explosive properties. They further state that induction is smooth, rapid, and not unpleasant even by the open-drop technique. Simple methods are adequate for its administration. Pharyngeal secretions are not stimulated; therefore, while premedication with atropine is not essential, it is advisable for counteracting the marked bradycardia encountered in deep and protracted anesthesia. Recovery is also rapid, and uncomplicated. With the possible exception of complete muscular relaxation, an adequate degree of anesthesia is provided by one to three per cent of Fluothane in air. A slowing of the pulse and a fall in blood pressure rather than being harmful

tends to give the surgeon a drier operating field. Excessive drops in pulse rate or blood pressure may be controlled by atropine, methyl amphetamine or ether. A disadvantage exhibited by Fluothane is depression of respiration; this may be overcome by assisting respiration, which will also enable greater depths of anesthesia and an increased scope of usefulness.

The authors inject a word of caution in the administration of Fluothane. Until it has received more extended application and until its properties have been more fully explored, they believe that it should be handled only by the skilled anesthetist. At present, it would seem that Fluothane is a valuable anesthetic agent especially for minor operations. The pleasant and rapid induction

—Continued on following page

with a single antibiotic...

rex

PHOSPHATE COMPLEX CAPSULES

—each capsule equivalent to 250 mg. tetracycline HCl

—average adult dose 1 capsule q.i.d.

A new, single broad-spectrum antibiotic compound — providing faster, higher, more efficient blood levels, practically double those of tetracycline HCl, within 1 to 3 hours after administration.



MODERN THERAPEUTICS

—Continued from preceding page

tion makes it particularly applicable for administration to children.

Peganone in the Treatment of Epilepsy

Samuel Livingston of Baltimore [*Journal of Pediatrics*, 49:728 (1956)] studied the action of Peganone, one of the newer anticonvulsant agents believed to be less potent than those already in use, but, at the same time, less toxic. The group consisted of 108 patients suffering from various types of epileptic seizures. Eighty-eight of the patients were under 14 years of age. Sixty-seven members of the group had not received anticonvulsant therapy; 25 had been treated without benefit, and seizures in 16 had been completely controlled by another agent, but side-effects had precluded continued administration. Peganone was supplied in 250

—Continued on page 161a

MEDICAL TEASERS

Solution to puzzle on page 43a

E	R	A	S		N	A	T	A	L		I	T	I	S
A	U	R	A		O	R	I	B	I		N	O	D	E
S	E	E	R		B	I	N	E	T		C	E	L	E
					T	R	A	C	H	E	A		R	E
					O	I	L		M	I	R	E	S	
					C	L	A	M	P		L	E	A	
											N	E	V	U
					H	E	M	A		M	A	T		A
											A	U	D	I
					O	B	I		C	A	C	H	O	U
											L	O	A	
					L	E	N	A	R	D		O	R	T
											S	L	I	T
					O	R	O	Y	A		O	D	A	
											M	A	I	D
						A	S	C	U	S		B	E	L
					C	A	M	P	H	O	R		T	U
											T	U	R	U
					U	V	E	A		L	A	B	O	R
										M	A	R	C	
					S	E	I	N		D	R	O	L	L
										I	R	A	N	
					P	R	O	A		S	I	N	U	S
										N	E	T	E	

BORDEN'S PRESCRIPTION PRODUCTS DIVISION
380 MADISON AVENUE, NEW YORK 17

Infant milk allergy an increasingly common problem according to recent literature

Current medical literature provides increasing evidence that cow's milk allergy is a common cause of eczema, colic, rhinitis, digestive disturbances, etc. in infants.

Analyzing 1,000 consecutive case records of infants seen in private practice, Moore¹ found 383 cases of "proved allergic reactions to food;" of these, 208 were allergic to cow's milk. DeVilbiss² states "cow's milk is involved in 25% of food allergies." Clein³ reports "approximately one of every fifteen infants is allergic to cow's milk to some degree." Crook,⁴ questioning 750 pediatricians selected nationwide at random, reports 70% of respondents stated "they saw more allergic problems than they had anticipated before entering practice."

These findings coincide with more general observations of allergy incidence. Green,⁵ writing on "Allergy in General Practice," states that 15% of the total population suffers from major allergies, while Ratner⁶ points to the greater susceptibility to allergy in children born of highly allergic families.

In summary:

Physicians should think of cow's milk as an etiologic factor in eczemas, g.i. upsets and upper respiratory disturbances of infancy—Replace cow's milk with MULL-SOY for simplified diagnosis, effective therapy, sound nutrition.



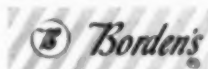
1. Moore, I. H.: *Journal-Lancet* 74:80, 1954. 2. DeVilbiss, L. A.: *Clin. Med.* 2:593, 1955. 3. Clein, N. W.: *Ann. Allergy* 9:195, 1951. 4. Crook, W. G.: Personal communication. 5. Green, M. A.: *Pennsylvania M. J.* 59:688, 1956. 6. Ratner, B.: *New York J. Med.* 56:1501, 1956.

COW'S MILK ALLERGY IN INFANTS

DOCUMENTED FACT*

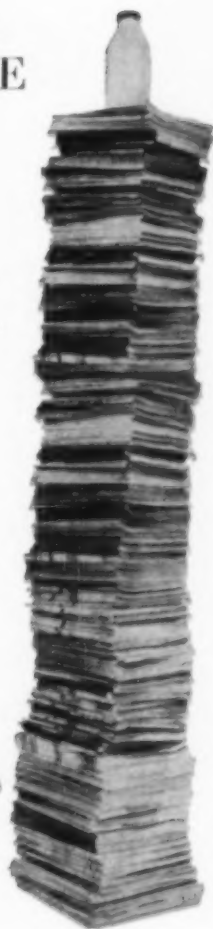
THE INCIDENCE OF COW'S MILK ALLERGY
ACCOUNTS FOR 25% OF ALL FOOD ALLERGIES

ESTABLISHED PRACTICE



MULL-SOY®

pioneer hypoallergenic alternative to cow's milk...now
even better in palatability, lighter color, freedom from
loose stools, in promoting normal growth and development.
Easily digested and assimilated, free of added potential
allergens, high in unsaturated fatty acids.



MULL-SOY • BREMIL • DRYCO • BETA LACTOSE • KLIM

products of BORDEN'S PRESCRIPTION PRODUCTS DIVISION, 350 Madison Ave., New York 17

*A comprehensive bibliography on cow's milk allergy is available to interested physicians.

Now in



Compo

Potassium
Penicillin V

*the higher blood levels
of penicillin V
in two, convenient potencies*

cillin-V

New *Filmstab* COMPOCILLIN-V provides all the therapeutic advantages of penicillin V blood levels (nearly three times as high as penicillin G)—plus two, convenient potencies.

It's indicated for all infections produced by penicillin-sensitive organisms. *Filmstab* COMPOCILLIN-V comes in 125 mg. (200,000 units), bottles of 50, and in 250 mg. (400,000 units), bottles of 25.

Abbott

©Filmstab—Film-sealed tablets, Abbott; pat. applied for.

FD-200A

**Gives fast relief of
nasal congestion**

Novahistine works better than antihistamines alone. The combined action of a vasoconstrictor with an antihistaminic drug provides marked nasal decongestion, inhibits excessive secretion... combats allergic reactions. Oral dosage avoids patient misuse of nose drops, sprays and inhalants... eliminates rebound congestion. Novahistine will not cause jitteriness or insomnia.

Each Novahistine Tablet or teaspoonful of Elixir provides 5.0 mg. of phenylephrine HCl and 12.5 mg. of propenpyridamine maleate. For patients who need greater vasoconstriction, Novahistine Fortis Capsules, Novahistine with APC and Novahistine with Penicillin Capsules contain twice the amount of phenylephrine.



*“unlock” the
closed-up
nose...*

 orally
WITH
Novahistine
IN COLDS...
SINUSITIS...
RHINITIS
Pittman-Moore Company
Division of Allied Laboratories, Inc. Indianapolis 6, Indiana



when colds
are complicated by
useless, exhausting
coughs

Novahistine-DH*

*promptly controls coughs
and clears obstructed air passages*

Each teaspoonful (5 cc.) of this palatable grape-flavored elixir contains:

Phenylephrine hydrochloride 10 mg.

Propenpyridamine maleate 12.5 mg.

Dihydrocodeinone bitartrate 1.66 mg.

Warning: may be habit forming

Chloroform (approximately) 13.5 mg.

I-Menthol 1.0 mg.

(Alcohol content, 10%;
sugar, 33 1/3 %)

*Trademark

Pitman-Moore Company

Division of Allied Laboratories, Inc.

Indianapolis 6, Indiana

MODERN THERAPEUTICS

—Continued from page 156a

and 500 mg. tablets. Dosage schedules were: under six years of age, 250 mg. three times daily to 750 mg. four times daily; six to 14 years, 500 mg. three times daily to 1,000 mg. four times daily, and over 14 years, 500 mg. four times daily to 1,250 mg. four times daily. The duration of therapy ranged from four to 16 months. Peganone proved most effective in grand mal seizures, and less so in psychomotor epilepsy. In minor motor seizures and petit mal benefits were not significant. A generalized morbilliform skin rash was the only significant side reaction. It occurred approximately ten days after beginning the medication, and disappeared within eight hours after withdrawal of the drug. A second course of Peganone did not cause the rash to reappear. The author believes that the therapeutic benefits obtained from the use of this agent together with the greatly lowered occurrence of side-effects makes its use of decided value. However, a more prolonged period of study is desirable.

"MEDIQUIZ" ANSWERS

(from page 61a)

1(B), 2(B), 3(A), 4(D), 5(B or C), 6(C), 7(D), 8(A), 9(B), 10(C), 11(C), 12(B), 13(C), 14(A), 15(B), 16(C), 17(C), 18(A), 19(C), 20 (B), 21(D), 22(B), 23(C), 24(B), 25(D), 26(D), 27(C), 28(A), 29(B), 30(D), 31(A), 32(C).



routinely...

“to reduce postoperative morbidity”

FURACIN Vaginal Suppositories used prophylactically before and after vaginal surgery as in hysterectomy—as well as before and after cauterization or radiation—provide a lasting bactericidal film. They prevent infection even in the presence of exudates and cellular debris. Discharge is minimized, healing is facilitated and convalescence shortened.

FORMULA: 0.2% FURACIN in water-miscible base. Box of 12 suppositories, each hermetically sealed in yellow foil.

To prevent urethrovaginal cross infection: antibacterial, anesthetic Furacin Urethral Suppositories; box of 12.

New
color
film:



Complete Vaginal Repair: A Simplified Approach

Stanley F. Rogers, M.D.; Jack Moore, M.D.; and Warren Jacobs, M.D.; Department of Obstetrics and Gynecology, Baylor University College of Medicine and Methodist Hospital, Houston, Texas.

Eaton is privileged to make this new film available to physicians. Showings may be arranged by writing The Medical Director.

Furacin[®] Vaginal SUPPOSITORIES

BRAND OF NITROFURAZONE

EATON LABORATORIES



NORWICH, NEW YORK

A brighter outlook comes
with a "sense of well-being"



Every woman who suffers in the menopause deserves "Premarin."

"Premarin" provides prompt relief from distressing symptoms and an added "sense of well-being."

"Premarin," available as tablets and liquid, presents the complete equine estrogen-complex. Has no odor, imparts no odor.

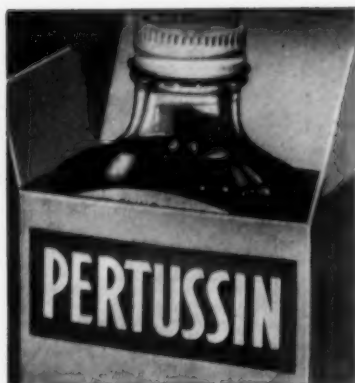
"PREMARIN"®

Conjugated estrogens (equine)

in the menopause and
the pre-and postmenopausal syndrome



AYERST LABORATORIES • New York, N. Y. • Montreal, Canada



Fulfills all 3 therapeutic objectives

with 1 single herbal ingredient

In treating coughs and respiratory disorders three objectives are essential: (1) Control of the cough impulse; (2) Stimulating natural respiratory tract fluid; (3) Increasing ciliary activity.

Pertussin fulfills all three of these requirements with one single herbal ingredient... *thyme!* The pharmacodynamic influence of Pertussin supplies such necessary therapeutic elements... yet it contains no opiates, bromides, coal tar derivatives or depressants. It is an ideal vehicle for other medications. Non-constipating. Equally effective for children and adults.

We will gladly send you a personal supply of Pertussin as well as enough for a few of your favorite patients. For your free supply, simply clip this advertisement and mail it together with your name and address to:

SEECK & KADE, INC.

Division of Chesebrough-Pond's Inc.
Department 2

440 Washington St., New York 13, N.Y.

WHAT'S YOUR VERDICT?

—Concluded from page 33a

The Supreme Court reversed the dismissal as to the surgeon and granted a new trial against all the defendants: "A surgeon is not responsible for the administrative acts performed by a nurse as an employee of the hospital. But the jury might have found from the testimony that the use of hot water bottles was not an administrative act, but a therapeutic act employed in the discretion of the surgeon; that the surgeon not only had complete authority and control but actually gave orders as to the application of the hot water bottles; and that therefore his legal responsibility did not begin at the moment of incision, but included the application of the hot water bottles as part of the operative process." Based on decision of Supreme Court of Pennsylvania.

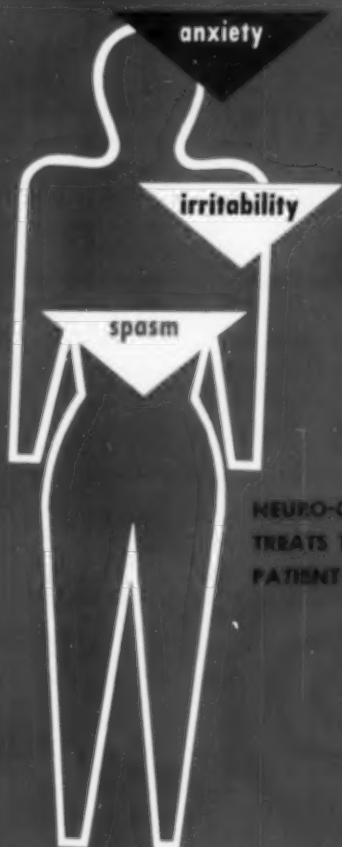
**varicose and
indolent ulcers**
in this skin disorder
and many more

**NEW Vioform-[®]
Hydrocortisone
Cream** antibacterial
 antifungal
 anti-inflammatory
 antipruritic

SUPPLIED: Vioform-Hydrocortisone Cream, containing ipodichlorohydroxyquin U.S.P. 3% and hydrocortisone (free alcohol) U.S.P. 1% in a water-washable base; tubes of 5 and 20 Gm. VIOFORM[®] (iodochlorohydroxyquin U.S.P. CIBA)

C I B A Summit, N. J. 07901

A new approach to the Total Tension Triad



NEURO-CENTRINE
TREATS THE
PATIENT AS A WHOLE

NEURO-CENTRINE™

People often respond to the stress of modern life with anxiety, irritability and spasm. Now, with NEURO-CENTRINE you can treat, not a single symptom, but the whole patient—the Total Tension Triad.

NEURO-CENTRINE combines in a single tablet three potent agents: 0.25 mg. *Centrine*®, Bristol Laboratories' own antispasmodic, to relax smooth muscles; 0.05 mg. *reserpine*, to relieve emotional tension; 15 mg. *phenobarbital*, to lessen physical irritability. *Dosage* is one tablet orally 3 to 4 times daily.

Bristol Laboratories Inc.
630 Fifth Avenue
New York 20, N. Y.

Please send me a sample of NEURO-CENTRINE.

Name

Street

City Zone State



NEWS AND NOTES

Grants for Construction of Medical Research Facilities Announced

Initial grants totalling \$765,159 to assist in the construction of medical research facilities were announced re-

cently by Dr. Leroy E. Burney, Surgeon General of the Public Health Service, Department of Health, Education, and Welfare.

These are the first Federal grants under a 3-year, \$90-million program enacted by the recent Congress to aid public and private institutions in building more and better research facilities.

Below is a list of the initial grants approved.

Psychiatrist to Head South's Mental Health Program

Dr. Wilfred Bloomberg, Boston psychiatrist, has been selected to head the

—Continued on page 168a

INSTITUTION & DIRECTOR OF PROGRAM	FACILITY	AMOUNT
Massachusetts General Hospital Boston, Mass. James C. White, M.D.	"Neurosurgical Floor, Warren Medical Science Building"	\$ 95,045
Albany Medical College of Union University Albany, N. Y. Harold C. Wiggers	"Construction of New Animal Quarters"	\$ 45,000
The Elizabeth Gamble Deaconess Home Association operating the Christ Hospital Institute of Medical Research Cincinnati, Ohio L. H. Schmidt	"Construction and Equipment of Four Floor on Institute of Medical Research Building"	\$184,000
University of Pennsylvania Philadelphia, Pa. Norman H. Topping, M.D.	"The William H. Donner Center for Radiology"	\$179,004
University of Minnesota Medical School Minneapolis, Minn. Dr. Harold S. Diehl	"Department of Anatomy Research Facilities; Jackson Hall"	\$ 26,110
University of Minnesota College of Medical Sciences Minneapolis, Minn. Dr. Harold S. Diehl	"Departments of Physiological Chemistry, Physiology, and Pharmacology Research Facilities—Millard Hall"	\$161,000
Georgetown University Washington, D. C. Rev. T. Byron Collins, S. J.	"Animal Research Laboratories"	\$ 75,000

For Infectious Diarrhea

THE FULL ATTACK...

Antibacterial
Adsorptive
Protective

Streptomagma combats bacterial diarrhea with multiple forces. It offers dihydrostreptomycin to control the streptomycin-susceptible organisms. Simultaneously, its pectin, kaolin, and alumina gel soothe the irritated bowel, promote development of well-formed stools, and aid in the removal of bacterial toxins and irritants.



Philadelphia 1, Pa.

STREPTOMAGMA[®]

Dihydrostreptomycin Sulfate and Pectin with Kaolin in Alumina Gel

NEWS AND NOTES

—Continued from page 166a

South's Regional Program in Mental Health Training and Research, conducted by the Southern Regional Education Board at Atlanta, Ga.

Dr. Bloomberg, who is Chief Psychiatry and Neurology Service, Veterans' Administration Hospital in Boston assumed his duties on January 1, 1957.

The announcement of Dr. Bloomberg's appointment as Associate Director for Mental Health was made by Dr. John E. Ivey, Director of the SREB.

"Dr. Bloomberg has made important contributions throughout his career to the solution of mental illness and the promotion of mental health," Dr. Ivey said in making the announcement.

"The South should benefit greatly from his interest and experience in training and research in universities his

competence as an administrator and his remarkable ease in working with the professional and lay people interested in mental health," Dr. Ivey added.

Dr. Bloomberg is a graduate of Harvard Medical School. He received his graduate training at the Massachusetts General Hospital and the Boston Psychopathic Hospital. He also attended the University of Halle in Germany.

In addition to his position at the Veterans' Hospital, Dr. Bloomberg is associate professor of neurology and psychiatry at the Boston University School of Medicine. He has been visiting professor of psychiatry at the University of California; served as neuropsychiatric consultant, First Service Command, during World War II; and has worked with numerous hospitals, penal institutions, and universities as consultant in psychiatry and neurology.

Dr. Bloomberg was born in Pitts-

—Continued on page 171a

for dermatitis
complicated or threatened
by secondary bacterial
invasion

NEO-MAGNACORT*

neomycin and ethamicort TOPICAL OINTMENT

unique topical steroid-antibiotic combining
the first water-soluble
dermatologic corticoid
MAGNACORT* (brand of ethamicort)
500 times as soluble as hydrocortisone, and
an outstanding topical antibiotic, neomycin

Supplied: in 1, 2 oz. and 1, 6 oz. tubes; 0.5% neomycin sulfate
and 0.5% ethamicort (hydrocortisone ethamate hydrochloride)



PFIZER LABORATORIES
New York, New York

*Trademark





AGE . . . In older people, chronic constipation and biliary dyspepsia are often the result of decreased food and water intake, inactivity, intestinal muscle atonicity, increased anorectal disorders, biliary stasis.

for biliary dyspepsia and constipation

OCCUPATION . . . Among the sedentary workers, chronic constipation and impaired digestion are often the result of lack of exercise which retards normal peristaltic action in the gastrointestinal tract.



Tablets of Caroid and Bile Salts with Phenolphthalein are specifically formulated to provide a 3-way, comprehensive approach to the problem of impaired digestion and elimination.

1. CHOLERETIC

2. DIGESTANT

3. LAXATIVE

Bile salts stimulate biliary flow for improved fat emulsification while Caroid steps up protein digestion up to 15%. Gentle stimulant laxatives induce formed, easily passed stools.

For patients who cannot or will not be managed by diet and exercise, Caroid and Bile Salts helps establish normal physiological patterns.

samples available on request

AMERICAN FERMENT COMPANY, INC., 1450 BROADWAY, NEW YORK 18, N. Y.

CAROID® AND BILE SALTS Tablets



Give your patient that extra lift with "Beminal" Forte 817

NEWS AND NOTES

—Continued from page 168a

burgh, Pa., is married, and has one daughter. He is a Fellow of the American Psychiatric Association; a member of the Group for Advancement of Psychiatry; and has served as president of the Massachusetts Society for Mental Hygiene; of the Massachusetts Society for Research in Psychiatry; and of the Boston Society of Psychiatry and Neurology.

VA Hospitals To Evaluate New Tranquilizing Drugs

Plans are completed for the first nation-wide evaluation of the new tranquilizing drugs for mentally ill patients in 37 Veterans Administration hospitals.

Dr. William S. Middleton, Chief Medical Director who released the announcement, said:

"VA, with its vast clinical material and its research potential, is in a unique position to carry out work on the tranquilizing drugs to benefit veterans and the nation."

The project will be conducted under the direction of VA's Psychiatry and Neurology Service, of which Dr. Jesse F. Casey is the director. Dr. Casey said the study is designed to answer questions of the drugs' effectiveness and toxicity, what dosage is desirable and how long it should be continued.

Dr. S. Theodore Ginsberg, chief of VA's Psychiatry Division, said two tranquilizing drugs now in clinical use will be used in the first study, which will involve about 1,000 patients with acute and chronic schizophrenia.

—Continued on following page

(Vol. 85, No. 3) March 1957



When high vitamin B and C levels are required give your patient that extra lift with "Beminal" Forte.

"Beminal" Forte—each capsule contains:

Thiamine mononitrate (B ₁)	25.0 mg.
Riboflavin (B ₂)	12.5 mg.
Nicotinamide	75.0 mg.
Pyridoxine HCl (B ₆)	3.0 mg.
Calc. pantothenate	10.0 mg.
Vitamin C (ascorbic acid)	150.0 mg.
Vitamin B ₁₂ with intrinsic factor concentrate	1/9 U.S.P. Unit

Improved formula

"BEMINAL" Forte
with VITAMIN C

Dosage: 1 to 3 capsules daily, or more, depending upon the needs of the patient.

Supplied: No. 817—Bottles of 100 and 1,000 capsules.



AYERST LABORATORIES

New York, N. Y. • Montreal, Canada

5703

171a

NEWS AND NOTES

—Continued from preceding page

Plans for the study were begun a year ago. It now will be carried forward under rigidly controlled conditions, with each hospital following the same procedure so that results of the study may be evaluated accurately, Dr. Ginsberg said.

Ventricular Fibrillation Prevented During Surgery

Ventricular fibrillation, which often accompanies heart operations under refrigeration, can now be prevented by injecting the heart with Novocain.

The technique is reported in a recent issue of the technical journal *Surgery* by Dr. Leo R. Radigan of the Public Health Service's National Heart Insti-

tute. The technique has also been reported from parallel research at Indiana University by Dr. Angelo Riberi. The Novocain technique is expected to increase the safety of operations performed with refrigeration, or hypothermia. Hypothermia permits the repair of many heart defects which would otherwise be incurable.

In heart surgery with hypothermia the anesthetized patient is placed in an ice bath until his body temperature falls twenty degrees below normal and a state somewhat comparable to the winter sleep of bears is reached. In the chill of hypothermia the normally urgent demands of body tissues for blood-borne oxygen are drastically reduced and the surgeon is provided with a period of eight to ten minutes in which he can interrupt the work of the heart and make repairs. At these unnaturally low body temperatures, however, the heart often loses its normal coordinated pattern of nerve impulses and muscle contractions. The individual heart muscle fibers may take up independent action and the heart fail to provide effective pumping action.

The effectiveness of the Novocain technique was demonstrated at the Heart Institute Clinic of Surgery in ice bath operations on the hearts of forty dogs under conditions which usually result in fatal ventricular fibrillation. The hearts of twenty of these dogs were treated with a series of Novocain injections at the top of the left auricle under the heart's "skinlike" epicardium. Ventricular fibrillation did not develop in a single dog so treated, but eighteen, or ninety percent, of the untreated dogs fibrillated.

To date, more than forty human pa-

**impetiginized
eczema**
in this skin disorder
and many more

**NEW Vioform-[®]
Hydrocortisone
Cream** antibacterial
 antifungal
 anti-inflammatory
 antipruritic

SUPPLIED: Vioform-Hydrocortisone Cream, containing iodochlorohydroxyquin U. S. P. 3% and hydrocortisone (free alcohol) U. S. P. 1% in a water-washable base; tubes of 5 and 20 Gm. VIOFORM[®] (iodochlorohydroxyquin U. S. P., CIBA)

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STRESSCAPS*

for
resilience
to
stress



Molehill situations quickly become mountainous to busy persons under persistent stress.

STRESSCAPS replenish the specific vitamin losses sustained by these individuals —increasing their resilience

to daily stress, restoring their efficiency.

The STRESSCAPS formulation is based on the most recent knowledge regarding the vitamin requirements of the human body under stress.



Reg. U. S. Pat. Off.

Each Capsule Contains:

Thiamine Mononitrate (B ₁)	10 mg.
Riboflavin (B ₂)	10 mg.
Niacinamide	100 mg.
Ascorbic Acid (C)	300 mg.
Pyridoxine HCl (B ₆)	2 mg.
Vitamin B ₁₂	4 mcgm.
Folic Acid	1.5 mg.
Calcium Pantothenate	20 mg.
Vitamin K (Menadione)	2 mg.
Average Dose: 1-2 capsules daily.	

Kidwell

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, N. Y.

NEWS AND NOTES

—Continued from page 172a

tients at the National Heart Institute have undergone "ice bath" heart operations thus protected by Novocain injections.

National Vitamin Foundation Research Grants

Fourteen new grants, for a total of \$78,100 to American universities and research institutions throughout the country will augment the extensive program of clinical and laboratory research in the fields of vitamins and nutrition of The National Vitamin Foundation, Inc.

The National Vitamin Foundation gives grants-in-aid for research semi-annually throughout the United States and abroad. These new grants include:

Dr. Laurens Anderson, University of Wisconsin; \$4,000 for study of the metabolism of myo-inositol in animal tissues.

Dr. A. E. Axelrod, University of Pittsburgh; \$9,000 for study of the role of nutritional factors in antibody production.

Dr. LaRoy S. Dietrich, Columbia University, New York; \$6,290 for study of pyridine nucleotide metabolism employing the niacin antagonists, 6 aminonicotinamide and 2-amino 1, 3, 4 thiazole.

Dr. Simon H. Wender, University of Oklahoma; \$3,350 for preparation of

In atherosclerosis.



Diagrammatic illustration of an atherosclerotic artery, showing serious reduction of the lumen through the deposition of lipid cholesterol plaques within the fibrous intima layer of the artery wall.

In two recent studies^{1,2} on a total of 86 subjects, the administration of nicotinic acid in high dosage (as provided by Vastran Forte[®]) resulted in "significantly" reduced cholesterol levels in 81.4 per cent, and caused the pattern of blood lipids to "change toward normal." Vastran Forte[®] also provides various factors of the B-complex to stimulate cellular metabolism.

1. Altschul, R., Hoff, A., and Stephen, J. D.: Arch. Biochem. 54:558, 1955.

2. Parsons, W. B., Jr. et al.: Proc. Staff Meet. Mayo Clin. 31:377, 1956.

Send for samples and literature

WAMPOLE LABORATORIES

radioactive flavonoid compounds for studies on the fate and possible role of bioflavonoids in animal metabolism.

Dr. Carl D. Douglass, University of Arkansas; \$3,500 for studies on the fate and possible role of bioflavonoids in animal metabolism.

Drs. R. S. Goodhart, B. F. Chow and S. A. Tauber, The Nutrition Clinics Fund, New York, New York; \$2,500 for studies of B₁₂ and B₉ metabolism in the aged.

Dr. Eldon G. Hill, University of Minnesota; \$4,500 for study of the role of vitamin E in the nutrition of the baby pig and its possible interrelationship with essential fatty acids.

Dr. M. K. Horwitt, Elgin State Hospital, Elgin, Illinois; \$9,000 for study of the tocopherol requirements of man.

Dr. S. H. Hunter, Haskins Laboratories, New York, New York; \$6,150 for study of the development of microbiological assay methods for folic group vitamins.

Dr. A. Leonard Lohby, New York Medical College, New York, New York; \$6,000 for study of urinary formimino-L-glutamic acid and other amino acid metabolites in folic acid deficiency.

Dr. G. W. E. Plaut, New York University-Bellevue Medical Center, New York, New York; \$4,000 for study of the mechanism of biosynthesis of B-complex vitamins.

Dr. R. W. Vilter, University of Cincinnati; \$10,000 for studies on vitamin B₉ deficiency in human beings.

Dr. M. Wachstein, St. Catherine's Hos-

—Continued on following page

a safe, effective means of reducing high cholesterol levels

In each capsule:

Nicotinic acid 375.0 mg.

Ascorbic acid 50.0 mg.

Riboflavin 2.5 mg.

Thiamine mononitrate 5.0 mg.

Cobalamin concentrate

(Vitamin B₁₂ activity)

1.0 mcg.

Calcium pantothenate

2.5 mg.

Pyridoxine hydrochloride

0.5 mg.

Dosage:

Two capsules 4 times
a day.

Supply:

Bottles of 100 capsules.

vastran[®] *forte* CAPSULES

ORALLY EFFECTIVE
PLASMA CHOLESTEROL
REDUCER

Henry K. Wampole & Co., Inc., Philadelphia 23, Pa.

WAMPOLE
86TH
YEAR

NEWS AND NOTES

—Continued from preceding page

pital, Brooklyn, New York; \$5,000 for study of blood and tissue levels of pyridoxal phosphate in pregnancy, the neonatal period and in abnormal conditions.

Dr. George Wolf, University of Illinois; \$4,810 for study of metabolism of radioactive vitamin A.

Medical Colleges' Association Meeting

The 67th Annual Meeting of the Association of American Medical Colleges

—Continued on page 180a

contact dermatitis

in this skin disorder and many more

NEW Vioform- Hydrocortisone Cream

antibacterial
antifungal
anti-inflammatory
antipruritic

SUPPLIED: Vioform-Hydrocortisone Cream, containing iodochlorhydroxyquin U.S.P. 3% and hydrocortisone (free alcohol) U.S.P. 1% in a water-washable base; tubes of 5 and 20 Gm.

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a remarkable likeness...

DIASAL®

salt without sodium

Supplied in 2-ounce shakers and 8-ounce bottles.

FOUGERA

E. FOUGERA & COMPANY, INC.
75 Varick Street, New York 13, N. Y.

176a



looks like salt...

tastes like salt...

behaves like salt...

MEDICAL TIMES

**VERSATILE
ANTIEMETIC**



FAST-ACTING

'MAREZINE'®

Cyclizine

- Prevents or quickly controls **NAUSEA, VOMITING** and **VERTIGO** associated with motion sickness . . . pregnancy . . . anesthesia . . . vestibular disturbances . . . and many other causes.
- Rarely induces drowsiness or other side effects.

Tablet:

'MAREZINE' Hydrochloride brand
Cyclizine Hydrochloride 50 mg., scored

Injection:

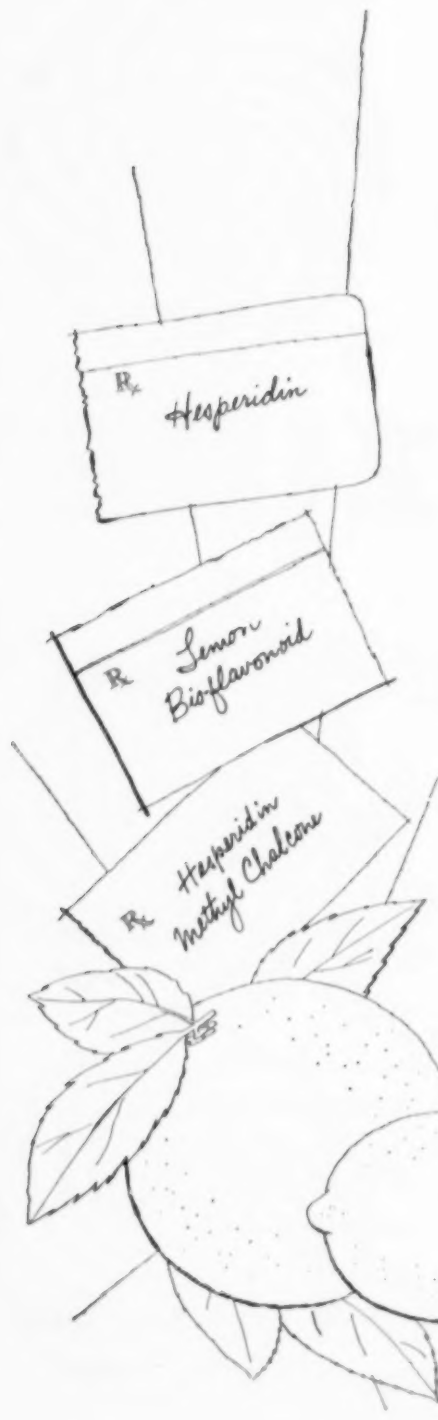
'MAREZINE' Lactate brand Cyclizine Lactate
50 mg. in 1 cc.

Suppository:

'MAREZINE' Hydrochloride brand
Cyclizine Hydrochloride 100 mg.



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Tuckahoe, New York



THE BIO-FLAVONOIDS

A growing group of clinical reports today indicates the importance of the Citrus Bio-flavonoids in health and disease.

Yet it was over 30 years ago that the first report of Sunkist Bio-flavonoid Research was published. As the manufacturer of citrus products, Sunkist Research has continued to produce standardized Citrus Bio-flavonoids to the Pharmaceutical Industry.

CITRUS BIO-FLAVONOIDS

Hesperidin
Hesperidin Methyl Chalcone
Lemon Bio-flavonoid Complex
Calcium Flavonate Glycoside

CLINICAL APPLICATIONS

Extensive Bio-flavonoid bibliography, reporting investigation over many years, is rapidly being favorably documented.

Hesperidin and the other Citrus Bio-flavonoids have been found effective as adjuncts in the treatment of disease syndromes in which capillary abnormalities appear at both subclinical and clinical levels.

Indications for the use of the Citrus Bio-flavonoids are on a twofold basis, as: 1. Nutritional factors. 2. Therapeutic agents.

Many therapeutic uses are as yet in suggestive and indicative stages—respiratory disease, etc. Conclusive evidence is being documented in the prenatal control of habitual abortion and in vascular disease.

Hesperidin and other Citrus Bio-flavonoids in combination with therapeutic agents and nutritional factors are available to the medical profession as specialties developed by leading pharmaceutical manufacturers.



PHARMACEUTICAL SALES



As with mother's milk . . .

Proteins

S-M-A contains 1.5 per cent protein,
and adequately satisfies
the baby's standard daily requirement
for 2 Gm. of protein per kilogram of body weight.
The important elements in milk protein
are the amino acids. S-M-A agrees closely
with human milk in its content
of these essential substances.
S-M-A protein is complete and adequate.



for sound infant nutrition

S-M-A[®]

Concentrated Liquid
Instant Powder



Philadelphia 1, Pa.

Dizziness in the elderly patient with arteriosclerosis



"Ten of the fifteen patients [with arteriosclerosis and hypertensive cardiovascular disease] studied were completely relieved of the vestibular symptoms . . . [after being] placed on Dramamine in doses varying from 25 to 100 mg. four times daily."

Goldman, I. R.; Stern, N. S., and Stern, T. N.: The Use of Dramamine in Vestibular Disturbances Complicating Hypertensive and Arteriosclerotic Heart Disease, *Am. Heart J.* 42:302 (Aug.) 1951.

for dramatic results

Dramamine®

Brand of Dimenhydrinate

SEARLE

NEWS AND NOTES

—Continued from page 176a

was held at Colorado Springs in November with an attendance of approximately 450. Among the many papers read, Dr. A. W. Schmidt's topic was "Medicine and Liberal Arts." He quoted from answers to questionnaires in which it was stated that "more emphasis on social sciences and humanities" would have been helpful. The Association members voted approval of requesting member institutions "to survey their potentialities and capacities in the light of the future need for health personnel," and of urging universities in large urban centers, now without a medical school, to give serious consideration to the establishment of one. A donation was ap-

—Continued on page 182a

chronic infectious dermatitis

in this skin disorder and many more

**NEW Vioform-®
Hydrocortisone
Cream**

antibacterial
antifungal
anti-inflammatory
antipruritic

SUPPLIED: Vioform-Hydrocortisone Cream, containing iodochlorohydroxyquin U.S.P. 3% and hydrocortisone (free alcohol) U.S.P. 1% in a water-washable base; tubes of 5 and 20 Gm. VIOFORM® (iodochlorohydroxyquin U.S.P. CIBA)

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from minor abrasions...

widest professional usefulness... FURACIN®

BRAND OF NITROFURANS

In the prevention and elimination of infection, more than ten years of clinical experience have established FURACIN as the topical antibacterial most widely useful to the physician.

effectively bactericidal • remarkably wide-range bactericide • effective against many organisms that resist other agents • dissolves freely and remains active in wound exudates

yet gentle to tissues • promotes healing through control of infection • non-macerating • does not retard epithelization

or granulation • low sensitization rate • no cross-sensitization to antibiotics or sulfonamides

spread FURACIN Soluble Dressing: FURACIN 0.2% in water-soluble, ointment-like base of polyethylene glycols. 56 Gm. tube; jar of 141 Gm., 454 Gm., 5 lb.

sprinkle FURACIN Soluble Powder: FURACIN 0.2% in powder base of water-soluble polyethylene glycols. Shaker-top vial of 14 Gm.

spray FURACIN Solution: FURACIN 0.2% in a liquid vehicle of polyethylene glycols 65%, a wetting agent 0.3% and water. Bottles of 89 cc. and 473 cc.

EATON LABORATORIES, NORWICH, NEW YORK




Nitrofurans—a new class of antimicrobials—neither antibiotics nor sulfonamides

...to major surgery




PHENAPHEN PLUS



NOSE COLD

each coated tablet:

Phenacetin (3 gr.)	194.0 mg.
Acetylsalicylic Acid (2½ gr.)	162.0 mg.
Phenobarbital (¼ gr.)	16.2 mg.
Hyoscyamine Sulfate	0.031 mg.
Prophepyridamine Maleate	12.5 mg.
Phenylephrine Hydrochloride	10.0 mg.



**infantile
eczema**
in this skin disorder
and many more

**NEW Vioform®
Hydrocortisone
Cream** antibacterial
antifungal
anti-inflammatory
antipruritic

SUPPLIED: Vioform-Hydrocortisone Cream,
containing iodochlorhydroxyquin U.S.P., 3%
and hydrocortisone (free alcohol) U.S.P., 1%
in a water-washable base; tubes of 5 and 20 Gm.
VIOFORM® (iodochlorhydroxyquin U.S.P. CIBA)

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NEWS AND NOTES

—Continued from page 180a

proved to be given to the Second World Congress on Medical Education to be held in Chicago in 1959. The Association will be a sponsor of Medical Educational Week to be held in April, and will co-sponsor the International Institute on Exchange of Persons scheduled for June.

Harveian Tercentenary Congress 1957

To commemorate the Tercentenary of the death of William Harvey, discoverer of the circulation of the blood, an International Congress on Circulation will be held from June 3 to 7 in the Royal College of Surgeons, London. The papers presented will cover every aspect of the circulation.

Research Grants Awarded to College of Medical Evangelists

The College of Medical Evangelists of California has recently been awarded two grants for research projects. Dr. J. E. Thomas will direct a project dealing with the physiology of the pancreas. The Institute of Arthritis and Metabolic Diseases will provide \$8,950 for equipment, supplies, and an assistant. Dr. R. W. Woods will head a group to study *Structures of Developing Tooth Bud as Shown by X-ray Microscopy*. Part of the grant of \$9,200 will be used for construction of an X-ray microscope.

Review Courses for the G.P.

Special review courses for practicing physicians have been scheduled by New

—Continued on page 184a

MEDICAL TIMES

IN PREVENTIVE GERIATRICS

toss father time into a tailspin
with **HESPER-C**
it makes the difference



Evidence of poor tissue nutrition is often already present in the aging patient, and poor capillary status further aggravates tissue starvation.

Some common symptoms of the geriatric patient, indicative of capillary fault:¹

easy bruising
difficult healing
muscle and joint pains
gingival and dental
complaints

tendency to bleed from
skin and mucous membranes
susceptibility to infection
hematuria
epistaxis

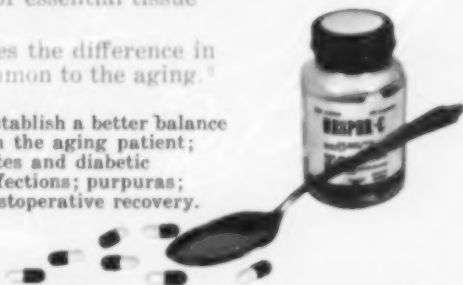
HESPER-C provides essential support for the nutrient supplying vascular termini, restoring and maintaining normal capillary permeability, to help prevent hemorrhage and enhance utilization of essential tissue nutrients and metabolites.²

Adequate intake of HESPER-C makes the difference in mitigating the effects of ailments common to the aging.³

Indications: Routine preventive geriatrics — to establish a better balance of tissue repair versus tissue destruction in the aging patient; cardio- and cerebrovascular diseases; diabetes and diabetic retinopathy; epistaxis; upper respiratory infections; purpuras; arthritis; fractures. HESPER-C hastens postoperative recovery.

Now available, convenient New HESPER-C LIQUID.

HESPER-C provides 100 mg. of fully active hesperidin concentrate plus 100 mg. ascorbic acid per capsule or per teaspoonful (5 ml.). **DOSAGE:** No less than 6 capsules or teaspoonfuls daily. Maintenance dose 4 capsules or teaspoonfuls daily. **SUPPLIED:** Liquid in bottles of 4 oz. and 12 oz. Capsules in bottles of 100 and 1000.



REFERENCES: 1. Gale, E. T. and Thewlis, M. W.: *Geriatrics* 8:59, 1953. 2. Martin, G. J. (Editor): *Hesperidin and Ascorbic Acid, Naturally Occurring Synergists*, Basel, Switzerland, Messrs. B. Karger, 1954. 3. Dresner, H. L., et al.: *Amer. Pract. & Dig. of Treatment* 6:912, 1955.

PRODUCTS OF ORIGINAL RESEARCH

THE NATIONAL DRUG COMPANY PHILADELPHIA 44, PA.

the "MECHANICAL" BARRIER in TRAUMA with inflammation and edema



1. 1-, 26-year-old male, maxillary fracture. Multiple contusions and marked edema about the face and nose. Maxillary submaxillary (left) fracture (right) in both eyes. Both eyes had markedly abnormal vision.

2. Onset of PARENZYME, every 12 hours. Some decrease of edema after 18 hours. After 36 hours, both eyes were normal. After 96 hours, edema fluid and brown (haze) cleared, contusions faded, treatment completed.

PARENZYME®

INTRAMUSCULAR TRYPSIN

alters the chemical and enzymatic phase of circulatory stasis in acute edematous and inflammatory conditions. Local circulation is re-established permitting all physiologic processes of repair to proceed unimpeded.¹ Edema fluid and necrotized tissue are resorbed, pain is quickly reduced, the inflammatory process is controlled and reversed with speeding of the healing process.^{2,3,4}

Menkin's concept⁵ is that the local circulation is cut off in these conditions by soft fibrin and other denatured macromolecular deposits clogging the capillaries, lymphatics and intercellular tissue spaces.^{6,7} The degree of the fibrinogen to fibrin polymerization is not such as to make it comparable with the fibrin of a fixed, formed clot.

PARENZYME, the first parenteral proteolytic enzyme, has a direct depolymerizing effect on the soft fibrin and other macromolecules which form a mechanical barrier around the injured area.⁸

1. Normal passage of fluid and solute thru capillary wall pore.

2. Impaction of capillary wall pore by soft fibrin and other denatured macromolecular deposits.

3. Intramuscularly administered trypsin tends to concentrate on the soft fibrin deposits.

4. Trypsin degrades material of soft fibrin deposits in the pores, opening the passageway again, permitting normal communication between blood and tissues.

INDICATIONS: The cardinal indication for PARENZYME is acute inflammation; traumatic wounds, skin ulcers, vascular disorders, ophthalmic inflammations.

DOSEAGE: 2.5 mg. (0.5 ml.) intramuscularly or 10 to 20 mg. intravenously. 4 to 6 times daily. **REVIEW MEDICAL WITHOUT INJECTION** may slowly intravenously dissolve blood, multiple doses of 10 mg. trypsin ml.

The film, **CLINICAL ENZYMOLOGY**, is available for showing at all medical meetings upon request. And be sure to watch for the Med-Audiographs, a series of recorded clinical discussions.

REFERENCES:

1. Williams, L. J. *Angiology*, 6: 473, 1953.
2. Williams, L. J. *Obstet. Gynec. Med.*, 3: 31-42, 1953.
3. Golden, H. E. *Clinical Med.*, 2: 383, 1953.
4. Golden, H. E. *Delaware State Med. J.*, 20: 207, 1954.
5. Menkin, V. *Proteases of Inflammation*, New York: MacMillan Company, 1950.
6. Inoué, G. *Immunology*, 1954.
7. Carotides, P. N. and H. H. *Delaware State Med. J.*, 27: 301, 1955.
8. Martin, G. J. *Exper. Med. & Surg.*, 1: 1-9, 1955.



PRODUCTS OF ORIGINAL RESEARCH

THE NATIONAL DRUG COMPANY PHILADELPHIA 44, PA.

Anti-Arthritic

Citrisan

corrects capillary seepage

Few single therapeutic agents are so generously endowed with antipyretic, anti-inflammatory and antirheumatic properties as CITRISAN.

Formula: Each tablet contains:

Salicylamide 5 gr.

Lemon Bioflavonoid Complex 50 mg.

Ascorbic Acid (Vitamin C) . . . 85 mg.

Each ingredient has an impressive service record.

Salicylamide, best tolerated of the salicylates, promptly relieves pain and skeletal muscle spasm. It is the drug of choice where massive salicylate therapy is indicated.

Lemon Bioflavonoid Complex, in conjunction with Vitamin C, corrects capillary seepage, stabilizes connective tissue ground substance, helps correct periarticular involvement. Lemon Bioflavonoid's effectiveness is "roughly 13 times that of rutin."¹

Ascorbic Acid augments the action of the Bioflavonoids and, in addition, corrects Vitamin C deficiencies common in debilitating diseases, especially during salicylate therapy.

1. Oil Paint and Drug Reporter, April 30, 1956.

Prescribe CITRISAN for reversal of the arthritic process, restoration of capillary integrity, and an increased sense of well-being.

A colorful, fact-packed brochure will give you the whole story. Send for it—today.



CHICAGO PHARMACAL COMPANY

5547 N. Ravenswood Ave.
Pacific Coast Branch

Chicago 40, Illinois
381 Eleventh St.,
San Francisco, Cal.



NEWS AND NOTES

—Continued from page 182a

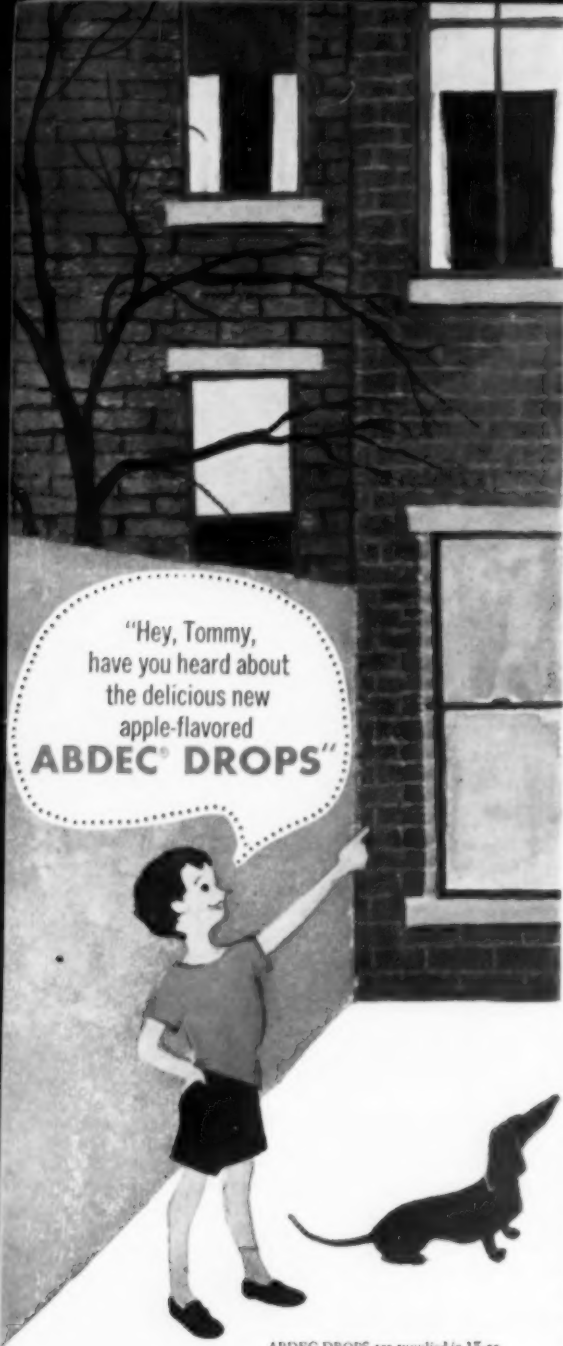
York University Post-Graduate Medical School.

On Thursdays from March 19 to April 2, 1957 lectures on the *Orthopedic Aspects of the Treatment of Rheumatic Disorders* will review basic orthopedic principles as applied to the treatment of rheumatic diseases, stressing the prevention and correction of the deformities caused. There will be demonstrations of clinical cases. Office practice will be stressed.

Two intensive review courses in cardiology for general physicians and internists will be available on a part- or full-time basis. The part-time sessions will be held on Thursdays from April 11 to May 23, 1957. A detailed review of all major forms of heart disease will be presented, with emphasis on clinical cardiology. From May 6 to 24, 1957, the full-time course will review basic knowledge and recent advances in the diagnosis and treatment of heart disease. Electrocardiography, and modern electrophysiology of the heart will be included.

Medical School Notes

• Dr. Walter C. Hess, Professor of Biochemistry and Chairman of the Department of Biochemistry at the Georgetown Schools of Medicine and Dentistry has been appointed to the newly-created post of Assistant Dean for Coordination of Research. The Medical Center currently carries on research projects totaling \$600,000 annually, a



"Hey, Tommy,
have you heard about
the delicious new
apple-flavored

ABDEC® DROPS"

ABDEC DROPS are supplied in 15-cc.
and in 50-cc. bottles with calibrated
non-breakable plastic droppers.

figure expected to show material increase. In addition to his active professorship, Dr. Hess will assist in planning research projects, will be responsible for integrating individual projects into the total activities of the Medical and Dental Schools and the University Hospital, and will be instrumental in obtaining grants for prospective projects.

- The New York University Post-Graduate Medical School has received a grant of \$3,800 from the Damon Runyon Memorial Fund for Cancer Research, Inc. The gift will be applied to the investigation of skin tumors.

- Dr. John A. D. Cooper, assistant dean of Northwestern University medical school, has been appointed to serve on the Atomic Energy Commission advisory committee on isotope distribution.

He will help determine policies for the use of radioisotopes in medicine and policies for the distribution of radioactive materials.

Dr. Cooper, who is also an associate professor of biochemistry, established the medical school's radioisotope unit in 1947. The unit provides special facilities for research and therapy with radioisotopes.

- A full-tuition, four-year scholarship has been established at Northwestern University medical school by Dr. and Mrs. John William Howser, of Oak Park, Illinois.

Named in honor of Dr. James K. Stack, associate professor of orthopedic surgery, the scholarship is to be awarded to an incoming freshman medical student selected by the school's scholarship committee. At the end of each four years, a new student will be selected.

—Continued on following page



*translation: "It so happens that highly palatable, apple-flavored ARDEC DROPS are, at present, my source of nutritional supplementation, providing ample amounts of eight important vitamins in aqueous, nonalcoholic form."



PARKE, DAVIS & COMPANY
Detroit 32, Michigan

41117

anogenital pruritus

in this skin disorder
and many more

NEW Vioform- Hydrocortisone Cream

antibacterial
antifungal
anti-inflammatory
antipruritic

SUPPLIED: Vioform-Hydrocortisone Cream,
containing iodochlorhydroxyquin U.S.P. 3%
and hydrocortisone (free alcohol) U.S.P. 1%
in a water-washable base; tubes of 5 and 20 Gm.
VIOFORM®(iodochlorhydroxyquin U.S.P. CIBA)

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Sinus Infections

rarely remain localized and if untreated
often cause serious tissue destruction.
Nasopharyngeal antiseptics as accom-
plished with the

Nichols NASAL
SYPHON

during FORTY years has become routine
in many clinics, oftentimes obviating the
necessity of surgical intervention. AERA-
TION and DRAINAGE are reestablished,
regenerating a healthy nasal
mucosa—thus enabling nature
to do it's important part in
throwing off the attack.
Write for Special Trial Offer!



**NICHOLS NASAL
SYPHON, Inc.**
MONTCLAIR, N. J.

NEWS AND NOTES

—Continued from preceding page

Dr. Howser was graduated from the
Northwestern medical school in 1937.

• Mr. Samuel D. Leidesdorf, has ac-
cepted the chairmanship of New York
University-Bellevue Medical Center's
board.

He joined the board of the Medical
Center, when it was formed in 1943, as
vice chairman of the executive and
finance committees and chairman of the
building committee. Since that time,
under Mr. Leidesdorf's leadership, all
but one of the five buildings planned
for the new \$32 million Medical Center
are completed or under construction.

Mr. Leidesdorf is also a member of
the executive committee and director of
the American Red Cross, New York
Chapter and treasurer of the National
Fund for Medical Education.

• Dr. John H. Ayyazian, medical intern-
ist at New York University College of
Medicine, is the first physician to be
awarded the I.W. Held Memorial Fel-
lowship in the department of medicine.

The Fund was established by Dr. A.
Allen Goldbloom as a memorial to his
late father-in-law, Dr. Isidor William
Held. Dr. Held was clinical professor of
medicine at NYU College of Medicine
from 1935 to 1941, specializing in the
field of gastroenterology.

Dr. Ayyazian, as the first Fellow, is
engaged in the investigation of the
physiologic and clinical aspects of the
enzyme desoxyribonuclease. This en-
zyme is found in human blood and is be-
lieved to originate from the pancreas
and other organs. It is being studied

—Continued on page 188a

5 reasons why "CYTOFERIN"®

is the logical combination in iron deficiency anemia

Vitamin C and ferrous iron, as combined in "Cytoferin," provide the direct approach to greater iron absorption and utilization because:

- 1 Iron is absorbed only in the reduced ferrous form.
- 2 Ingested iron can be maintained in a reduced state only in an acid environment.
- 3 Vitamin C given with iron acts as an acidifying and reducing agent at the site of maximum absorption.
- 4 Vitamin C increases the availability of iron for hemoglobin and red blood cell formation, as well as to build body reserves.
- 5 The combination of iron and vitamin C is likely to be better tolerated than iron alone.

"Cytoferin" Tablets—No. 705, bottles of 100 and 1,000. "Cytoferin" Liquid—No. 945, bottles of 8 fluidounces. Stable liquid preparation; nonalcoholic; extremely palatable; may be taken undiluted.

Each tablet or 10 cc. (2 tsp.) contains:

Ferrous sulfate* (3 gr.)..... 200 mg.
Vitamin C (ascorbic acid)..... 150 mg.

*Exsiccated in the tablets, and U.S.P. in the liquid.

Suggested dosages: To be taken preferably with meals. Adults and children: 1 tablet or 2 teaspoonfuls (10 cc.) two or three times daily. Infants and children: 1 teaspoonful (5 cc.) two or three times daily depending on age.

Bibliography available on request.



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5713

NEWS AND NOTES

—Continued from page 186a

in relation to the function and diseases of the pancreas.

Since receiving his medical degree from Harvard in 1952, Dr. Ayvazian has been with The Bellevue Hospital Center as an interne, resident, and chief resident. In 1955 he was awarded the John Wyckoff fellow in medicine and in 1956 the USPHS fellowship. In addition to his research work at NYU, he is presently clinical assistant visiting physician at The Bellevue Hospital Center.

- A \$600,000 fund for research into the cure and treatment of rheumatic fever and related diseases has been established

at the Northwestern University medical school by Samuel Sackett of Evanston, Ill.

Mr. Sackett's gift will be used to expand a research and treatment program initiated in 1954 by a grant from the Samuel Sackett Foundation. Mr. Sackett has now given the assets of this foundation to Northwestern as a permanent endowment, the income from which will be used to underwrite the program.

"The progress already achieved in the early stages of this program has been very encouraging to me and to University officials," Mr. Sackett said. "I therefore have decided to give to Northwestern all assets of the foundation in order to insure that this important work will be continued and expanded."

Revitalize the geriatric patient...

- stimulates cerebral circulation
- improves cerebral nutrition
- increases mental and physical vitality



WAMPOLE
86TH
YEAR

The program is directed by Dr. Gene H. Stollerman, one of the nation's foremost authorities on rheumatic fever and children's heart diseases.

• Dr. Sidney Raffel, head of the Medical Microbiology Department at Stanford School of Medicine, has been appointed chairman of a newly created Allergy and Immunology Section of the National Institutes of Health, U. S. Public Health Service.

Dr. Raffel's group will be one of approximately 20 study sections composed of outstanding authorities in the major medical research fields. The function of these special consulting groups is to provide the National Advisory Councils of the Institutes of Health with the best scientific advice on applications for research grants.

The Stanford scientist is a noted research immunologist, and in recent years has been investigating tuberculosis and aspects of allergic disease. He will be transferred from the Institutes' Microbiology Section, on which he has served for nearly a year. His appointment as chairman of the new section is for a period of four years.

• Working drawings for the joint Palo Alto-Stanford Hospitals in the future \$22,000,000 Stanford Medical Center should be complete and ready for approval soon.

The finished hospital plans will require approval by the project's joint steering committee, as well as by the city council and Stanford's trustees, after which they will be released for construction.

—Continued on following page

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VASODILATOR AND SAFE METABOLIC STIMULANT

In each VASTRAN tablet:

Nicotinic acid	50 mg.	Pyridoxine	
Ascorbic acid	100 mg.	hydrochloride	1 mg.
Riboflavin	5 mg.	Calcium pantothenate	5 mg.
Thiamine mononitrate	10 mg.	Cobalamin	2 mcg.
		(Vitamin B ₁₂ activity)	

Bottles of 100 and 500.

In each cc. of VASTRAN AMP solution:

Nicotinic acid (as sodium salt)	20 mg.
Adenosine-5-Monophosphoric acid (as sodium salt)	25 mg.
Vitamin B ₁₂	75 mcg.

In 5-cc. sterile vials.

Also effective in relieving muscle and joint pain, and in overcoming circulatory insufficiency, as in Raynaud's disease, Buerger's disease, varicose veins and other peripheral vascular disorders.


After each dose—oral or intramuscular—patients experience a warm, tingling flush to substantiate Vastran's vasodilating effect.

Nicotinic acid, as provided in Vastran, has been found in numerous clinical tests to improve cerebral circulation and nutrition in elderly patients and to stimulate the central nervous system. Other coenzymes in Vastran spark metabolism in brain and body. Thus, Vastran helps to arrest geriatric slowdown, to overcome apathy and fatigue, and to provide prophylaxis against the psychoses of late maturity.

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HEAD COLD

each coated tablet:

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Acetylsalicylic Acid (2½ gr.)	162.0 mg.
Phenobarbital (¼ gr.) . . .	16.2 mg.
Hyoscyamine Sulfate . . .	0.031 mg.
Prophepyridamine Maleate	12.5 mg.
Phenylephrine Hydrochloride	10.0 mg.

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**varicose and
indolent ulcers**
in this skin disorder
and many more.

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NEWS AND NOTES

—Continued from preceding page

struction bids. Hospital construction is expected to begin late in April, be finished by November 1958, and the hospitals should commence admitting patients in February 1959.

TB Death Rate, Polio Cases, Down for 1956

For 1956, the death rate in the United States is indicated as 9.3 per 1,000 population, or on a par with that for 1955. The year just ending is the ninth in succession to show a national death rate below 10 per 1,000 population.

A noteworthy feature of the mortality in 1956, Metropolitan Life Insurance statisticians note, is the exceptionally low death rate from tuberculosis—about 9 per 100,000 population. This represents a decrease of approximately 5 percent from the all-time low established the year before. As recently as a decade ago the tuberculosis death rate was four times its present level. A quarter century ago the rate was over 8 times what it is now.

Poliomylitis cases in the United States were little more than half the number recorded in 1955. By the end of 1956 there will have been about 15,500 cases of the disease reported, compared with 29,000 the year before. Some of the decrease in 1956 undoubtedly reflects the effectiveness of the Salk vaccine, the statisticians pointed out.

Another favorable development for the year was a decrease of about 40

—Continued on page 194a

'Thorazine'
relieved this
patient's
severe anxiety
and helped her
to gain insight.

**"No X-ray
sees my
cancer."
"...nothing
stops
my pain."**



'THORAZINE' CASE REPORT

patient: 60-year-old female. After death of relative from cancer, patient developed severe epigastric pain, was convinced pain was due to hidden malignancy which defied the X-ray. Her pain was unresponsive to antispasmodics. Her severe cancerphobia was untouched by sedatives and she refused psychotherapy.

response: Complete relief from pain was obtained after two weeks of 'Thorazine' therapy.

Patient then stated she "knew all the time it wasn't cancer." 'Thorazine' was instrumental in providing both relief and insight when "many drugs and attempts at reassurance had failed."

This case report is from the files of the patient's physician; photo professionally posed.

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VI-DOM-A-C Oral-Tabs a new vitamin A and C combination specifically formulated for the treatment of ACNE.

"Our studies have shown conclusively that these vitamins are useful agents in correcting the follicular plugging present in acne vulgaris. Vitamin C is also beneficial in correcting iron deficiency anemia, a condition frequently present in adolescent patients . . . Vitamin C and A proved to be more beneficial to acne patients when given simultaneously instead of separately." (1)

The buccal mucosal absorption of both vitamins A and C eliminates gastric destruction and liver deposition. VI-DOM-A-C Oral-Tabs harbor no detergents or dispersing agents, are pleasantly flavored and dissolve slowly for efficient absorption through buccal mucosa. They contain 50,000 USP units of synthetic Vitamin A, 500 mg. Vitamin C and are available in bottles of 25 and 100.

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VLEM-DOME Powder Packets are boxed in 12 and 100 packets and in bulk powder 4 oz. containers.

REFERENCES

- (1) S. M. Bluefarb, M.D. "The Management of Acne Vulgaris in the 12 and 17 Year Age Group", Postgraduate Medicine, 19:144, Feb., 1956.
- (2) S. W. Becker and M. E. Obermayer, Modern Dermatology and Syphilology, 2nd Edition.



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Hypertensive Objective: **ACTIVE LIVING**

... from incapacitating hypertension to a life of usefulness.

Case History:† A.B., 42-year-old hospitalized patient with severe hypertension and early heart failure. Blood pressure prior to treatment was 240/160 mm. Hg. ANSOLYSEN was administered orally t.i.d. The dose was adjusted to the patient's requirements. Blood pressure was reduced to, and stabilized at, an average level of 150/105 mm. Hg. There was marked symptomatic improvement, and the patient was able to return to work.

†. Case history on file in Medical Department of Wyeth Laboratories.

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Lowers Blood Pressure



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in a water-washable base; tubes of 5 and 20 Gm.
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NEWS AND NOTES

—Continued from page 190a

percent in reported cases of infectious hepatitis. It now appears that there will be approximately 19,000 cases of the disease reported in the country during 1956, while in 1955 there were nearly 32,000.

New low mortality rates are indicated for both infant and maternal mortality in the United States. The infant mortality rate is 26 per 1,000 live births in 1956, which is about 25 percent below that 10 years earlier. Much more rapid has been the improvement in maternal mortality, which dropped to about 4 per 10,000 live births in 1956 from 15.7 in 1946.

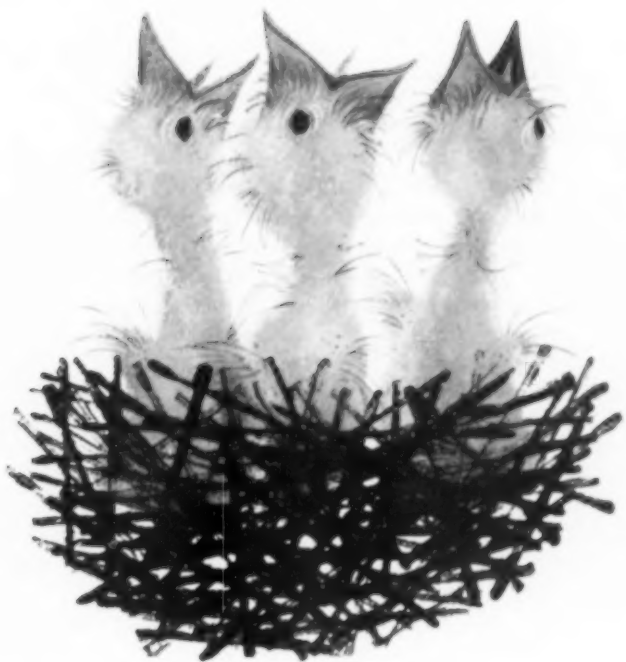
Electro-Lung Will Aid C. P. Children

An electrical device for stimulating and regulating the muscles of breathing is giving cerebral palsied children a chance for more normal speech. The apparatus, known as an electro-lung, is being used on children whose breathing rate is disturbed so much that they have difficulty in speaking.

The device is in use in the Northwestern University department of speech correction and audiology. According to Dr. Harold Westlake, head of the department, normal persons breathe approximately 14 to 16 times a minute while some children with cerebral palsy breathe between 60 and 80 times a minute. Such rapid breathing makes continuous speech impossible, he says.

The electro-lung superimposes a

—Continued on page 196a



children are often this eager...

Because Rubraton tastes so good, most children actually look forward to taking it. What better way could there be for providing these essential nutrients?

Rubraton is indicated for combatting many common anemias and for correcting mild B complex deficiency states. It may also prove useful for promoting growth and stimulating appetite in poorly nourished children. (Not intended for treatment of pernicious anemia.)

Dosage: 1 or 2 teaspoonfuls t.i.d.

Supply: Bottles of 8 ounces and 1 pint.

1 teaspoonful (5 cc.) supplies:

Elemental Iron	38 mg.
(as ferric ammonium citrate and colloidal iron)	
Vitamin B ₁₂ activity concentrate	4 mcg.
Thiamine mononitrate	1.0 mg.
Riboflavin	1.0 mg.
Niacinamide	5 mg.
Pantothenic acid (Panthenol)	1.5 mg.
Pyridoxine hydrochloride	0.5 mg.

Alcohol content: 12 per cent

RUBRATON

SQUIBB IRON, B COMPLEX AND B₁₂ VITAMINS ELIXIR

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Squibb Quality—the Priceless Ingredient

NEWS AND NOTES

—Continued from page 174a

proper pattern of breathing and gives the child the opportunity to experience and learn the proper rhythm. Once he has experienced the rate of regular breathing, he has something to aim at on his own.

Work on cerebral palsied children at the Northwestern speech clinic has produced excellent results within six weeks, according to Dr. Frank Wilson, research worker. He reports that six weeks of treatment for one-half hour a day changed one child from being totally inarticulate to having "socially accepta-

ble" speech. In most cases the improvement is moderately good. Dr. Wilson refers to the electro-lung as a "movable respiratory brace."

Attached to the machine are bands with electrodes. One band is strapped around the thoracic cage and the other around the rectus abdominus muscles. The electrical charge causes the muscles to contract, pushing the viscera up against the diaphragm, thereby causing the patient to exhale. It is possible in this way to control the rate and depth of inspiration and exhalation. When the rate of breathing is slowed down, there is a resulting improvement in speech.

The machine was developed in Germany for use with asthma and emphy-

Effective analgesic, antipruritic action in Otic Conditions



otodyne®

- ... Rapid, intense and prolonged analgesic action with the complemental anesthetics, zolamine and Eucupin.*
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sema patients and was brought to Northwestern two years ago for experimentation.

U.S. Families Becoming Larger

Families are becoming larger in the United States, the Metropolitan Life Insurance Company's statisticians report.

This is evidenced by an increasing number of couples now having a third or fourth child. The annual rate for third births has climbed from 1.8 per 100 married women under age 45 in 1940-41 to 3.1 per 100 in 1954-55. For fourth births, the rate increased by 70 percent during this period.

Fifth and subsequent births also increased somewhat in recent years and are likely to continue upward for the balance of the decade, according to the statisticians. They see little likelihood, however, that the rates for these birth orders will return to the levels of the 1920's.

Second births increased almost without interruption from a low point in 1933 to a peak in 1952. Although the rate has since fallen off somewhat, it still is at an unusually high level—one-third above the rate in 1940, and about one-eighth higher than in 1920.

"In 1945-55 the number of families which had a second child exceeded those

—Continued on page 200a

For Middle and External Ear Infections

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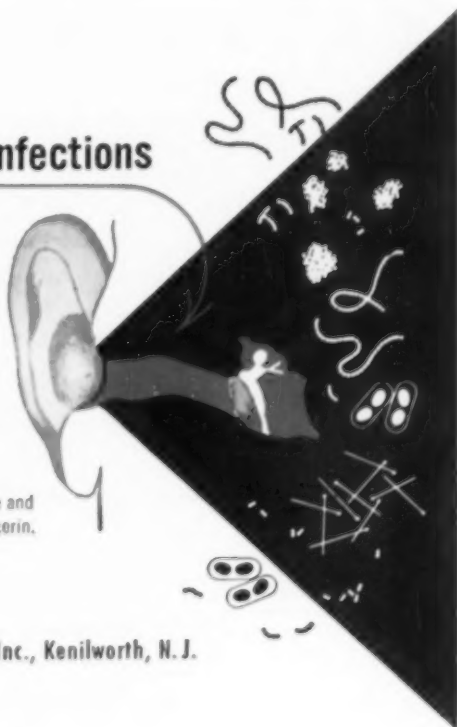
Chemical debridement—infection site rapidly cleansed—odors reduced, and waste material removed.

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parenteral hemostat

controls and prevents blood loss

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Saves blood in various types of hemorrhage...safely...by acting directly on the last phases of the clotting mechanism.

Saves time in office and operating room by stemming capillary and venous bleeding and preventing hemorrhage.

1. Joseph, M.: Control of Hemorrhage—or Transfusion, *Am. J. Surg.* 87:905, 1954. 2. Crisp, W. E.: Editorial; One Pint of Blood, *Obst. & Gynec.* 7:216, 1956. KOAGAMIN, an aqueous solution of oxalic and malonic acids for parenteral use, is supplied in 10-cc. diaphragm-stoppered vials.

**no untoward reaction—including thrombosis—ever reported in 18 years of clinical use.*

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MAJOR ADVANTAGES: New synergistic anti-inflammatory, decongestant and antibacterial formula. High steroid content assures effective response.



Topically applied hydrocortisone¹ in therapeutic concentrations has been shown to afford a significant degree of subjective and objective improvement in a high percentage of patients suffering from various types of rhinitis. **HYDROSPRAY** provides **HYDROCORTONE** in a concentration of 0.1% plus a safe but potent decongestant, **PROPADRINE**, and a wide-spectrum antibiotic, **Neomycin**, with low sensitization potential. This combination provides a three-fold attack on the physiologic and pathologic manifestations of nasal allergies which results in a degree of relief that is often greater and achieved faster than when any one of these agents is employed alone.

INDICATIONS: Acute and chronic rhinitis, vasomotor rhinitis, perennial rhinitis and polyposis.

SUPPLIED: In squeezable plastic spray bottles containing 15 cc. **HYDROSPRAY**, each cc. supplying 1 mg. of **HYDROCORTONE**, 15 mg. of **PROPADRINE Hydrochloride** and 5 mg. of **Neomycin Sulfate** (equivalent to 3.5 mg. of neomycin base).



MERCK SHARP & DOHME
DIVISION OF MERCK & CO., INC.
PHILADELPHIA 5, PA.

REFERENCE: 1. Silcox, I. E., *A.M.A. Arch. Otolaryng.* 60:431, Oct. 1954.

NEWS AND NOTES

—Continued from page 197a

having a first child—a situation which is probably without precedent in our history," the statisticians comment.

Phobias Keep Many from Marrying

A large number of persons in this country never marry because of phobias about marriage, according to a leading psychiatrist.

Writing in a recent issue of the *Journal of Hillside Hospital*, Glen Oaks, New York, Dr. Jacob H. Friedman reports that one out of three persons in this country do not marry. Dr. Friedman is Director of the Neuropsychiatric Service of Fordham Hospital and Chief

of the Mental Hygiene Clinic at Lebanon Hospital.

Dr. Friedman said that most persons with marriage phobias do not know the real cause of their unwillingness or inability to marry and delude themselves with irrelevant rationalizations. To outsiders these persons may appear to have normal and valid reasons for not marrying. But actually they "... remain unmarried due to unconscious motivating factors which are responsible for the individual's unrecognized marriage phobia."

In males, the common rationalizations for not marrying are: (1) Marriage entails too much responsibility; (2) Marriage means loss of liberty; (3) They were deceived by one female, therefore "all women are no good"; (4) Aggression against mother, "all women are like mothers"; (5) Women are promiscuous and untrustworthy; (6) Marriage is too much of a gamble as shown by the divorce rate; (7) Married women are too demanding and want too much; (8) Too high standards in seeking a wife; and (9) Fear of inheritance of mental illness.

Dr. Friedman gave these common female rationalizations for not marrying: (1) Fear of pregnancy; (2) Fear of inheritance of mental illness; (3) Parental attachment; (4) Fear of infidelity of future husband; (5) Guilt in relation to childhood sexual activity; (6) Fear of marital relations; (7) Fear of future husband possessing the undesirable traits of father or brother; (8) Jilted by one man, therefore "all men are no good"; (9) Desire for a wealthy husband.

Commenting on the successful treatment of twenty patients suffering from

—Continued on page 203a

**contact
dermatitis**
in this skin disorder
and many more

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Hydrocortisone
Cream** antibacterial
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Assure speedier relief when an attack does occur—within seconds—employing the pulmonary portal of entry, the most direct, quickest-acting route to the coronary circulation, by means of Medihaler-Nitro inhalation.

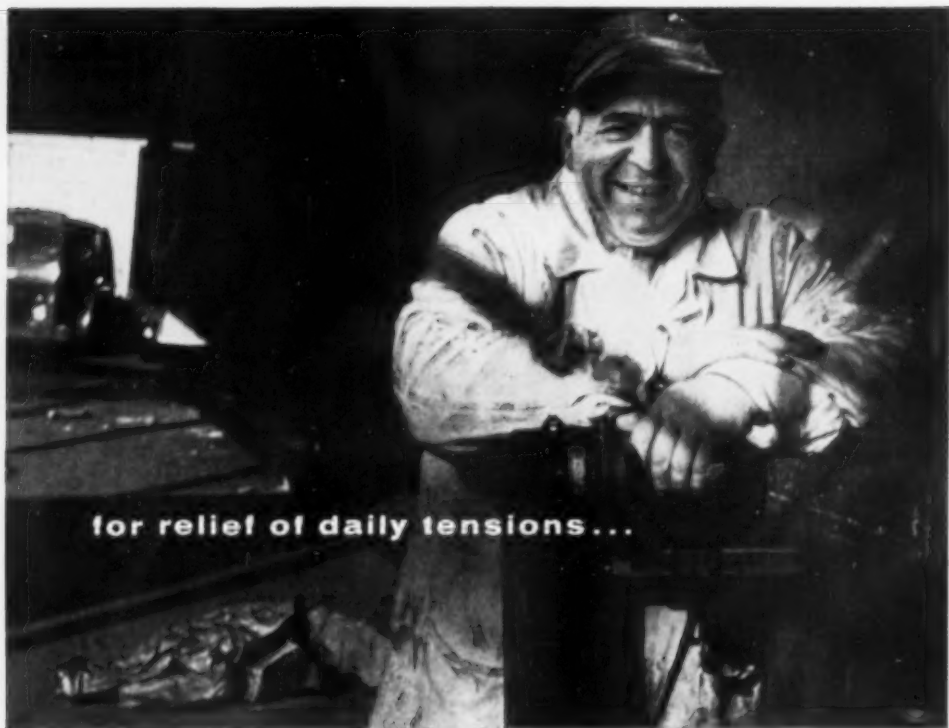
Each metered dose provides 0.25 mg. octyl nitrite in self-powered nebulization...

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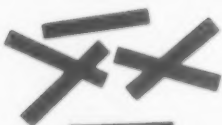
Dosage: one to two tablets q.i.d., before meals and on retiring.

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Ectylurea, AMES
(higher melting isomer of
2-ethylcrotonylurea)

the power of gentleness

helps patients face everyday anxieties and tensions

*"...mild action promotes an over-all calmness..."**

New and Different • not a hypnotic-sedative—unrelated to any available chemopsychotherapeutic agent • no evidence of cumulation or habituation • does not cause gastric hyperacidity • unusually wide margin of safety—no significant side effects

Dosage: 150-300 mg. three or four times daily.

Supplied: 300 mg. scored tablets, bottles of 48.

*Ferguson, J. T.: J. Am. Geriatrics Soc. 4:1080, 1956.



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NEWS AND NOTES

—Continued from page 200a

marriage phobia, Dr. Friedman said: "... these patients did not realize they had an unconscious marriage phobia. They were shown the type of defense mechanism they employed to avoid marriage. However, due to innate instinctive and cultural forces as well as environmental pressure, their defense mechanism failed and as a result symptomatology (annoying symptoms) occurred. After the perception of their symptom complex, coupled with . . . psychotherapy, the twenty patients became symptom-free and married."

Dr. Gerbode Honored

The highest honor conferred by St. Bartholomew's Hospital Medical College in London has been awarded to a San Francisco surgeon, Dr. Frank Gerbode of Stanford Medical School, it was announced recently.

St. Bartholomew's is one of the oldest hospitals in continuous existence in the world and the oldest of the London hospitals, having been founded in 1123.

Dr. Gerbode was informed of his unanimous election as an "Honorary Perpetual Student" by the dean of the British institution. He is the 16th to be so honored, and the second from Stanford Medical School.

Dr. Emile Holman, emeritus head of Stanford's Department of Surgery, is also a Perpetual Student of the College. Others include the two dukes of Windsor and Gloucester, and such medical figures as Professors Harvey Cushing, G. Grey Turner, and Dr. Evarts A. Graham.

Dr. Gerbode served as an associate in surgery at St. Bartholomew's Hospital in 1949. He was recently chosen first vice president-elect of the American College of Surgeons, and is a past president of the San Francisco Heart Association.

Frederick C. LeRocker Appointed Director of Sloan Institute

Frederic C. LeRocker, director of support activities at the Memorial Center for Cancer and Allied Diseases in New York City for the past year, has been appointed director of the Sloan Institute of Hospital Administration and Professor of Hospital Administration in the Graduate School of Business and Public Administration at Cornell University. Cornell President Dean W. Malott revealed that Mr. LeRocker will

—Continued on following page

chronic infectious dermatitis

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Hyoscyamine Sulfate . . .	0.031 mg.
Prophepyridamine Maleate	12.5 mg.
Phenylephrine Hydrochloride	10.0 mg.



NEWS AND NOTES

—Continued from preceding page

assume his new duties at the beginning of the spring semester.

Mr. LeRocker will become the first director of the Sloan Institute of Hospital Administration at Cornell. The Institute was established here in 1955, with a basic grant of \$750,000 from the Alfred P. Sloan Foundation, Inc., to make possible a new experimental program in hospital administration, designed to provide a balance between an administrative and management emphasis on the one hand and health program considerations on the other.

Mr. LeRocker is a native of New York City; he attended New Jersey public schools and was graduated from Rutgers University with a bachelor of letters degree in 1930. He received the master of hospital administration degree at the University of Minnesota in 1951.

Since receiving his degree in hospital administration, Mr. LeRocker has been assistant administrator at San Jose, Calif., Hospital 1951-53, and associate general manager of the Memorial Center for Cancer and Allied Diseases in New York, 1953-55.

He is a member of the American College of Hospital Administrators, and a consultant on hospital administration to the Professional Examination Service of the American Public Health Association.

California Academy of Medicine Elects 1957 President

Dr. L. Henry Garland, eminent San

—Continued on page 208a

MEDICAL TIMES

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Painful Shoulder Syndrome

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literature before instituting therapy.

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the first gamma globulin specific for mumps

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Passive prevention or treatment of mumps in children and adults. In treatment, reduces incidence of orchitis markedly if administered early in adequate amount.

ANTIMUMPS SERUM

(Human),

concentrated

The gamma globulin fraction of blood from healthy human donors who have been hyper-immunized with mumps virus vaccine.

2.5 cc. vials

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MEDICAL TIMES

CLINICAL REPORTS

Persistent Psoriasis cleared with **RIASOL**

The clinical file cards of physicians who have used RIASOL in the treatment of psoriasis show remarkable results. In some cases the thick crusted lesions had been present for many years without any remission, in spite of various local medications.

When RIASOL is applied according to directions, the results in stubborn cases of psoriasis may appear almost unbelievable. Patches which have been present for years may disappear in weeks.

Physicians who have been discouraged by slow, uncertain results with chrysarobin, tar, salicylic acid and other local medications are invited to try RIASOL. Not only are therapeutic results usually better, but local irritation is largely avoided as well.

RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% cresol in a washable, non-staining, odorless vehicle.

Apply daily after a mild soap bath and thorough drying. A thin, invisible, economical film suffices. No bandages required. After one week, adjust to patient's progress.

Ethically promoted RIASOL is supplied in 4 and 8 fld. oz. bottles at pharmacies or direct.



BEFORE USE OF RIASOL



AFTER USE OF RIASOL



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Dept. MT-357

12850 Mansfield Avenue, Detroit 27, Michigan

RIASOL FOR PSORIASIS

NEWS AND NOTES

—Concluded from page 204a

Francisco radiologist and a clinical professor at Stanford School of Medicine, has been elected president of the California Academy of Medicine for 1957.

The Academy is one of the oldest scientific societies in California. More than 500 physicians are members.

The Stanford radiologist is a past president of the Radiological Society of North America, secretary of the Cancer Commission for the California Medical Association, and chairman of the Committee on Cancer Diagnosis and Therapy


for the National Research Council.

G. P. Receives Poetry Fellowship

Dr. William Carlos Williams, physician, poet, author and essayist, has been awarded the 1956 Fellowship of the Academy of American Poets.

The Fellowship carries a prize of \$5,000 for one year.

Dr. Williams, a general practitioner in Rutherford, N. J. since 1909, published his first book of verse over 40 years ago. In all, he has written 37 books including poetry, short stories, essays and novels.



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ASSOCIATE SPANISH SPEAKING physician wanted; only qualified need apply; New Jersey License required. J. R. Herradora, M.D., 2750 Boulevard, Jersey City, New Jersey.

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References: 1. Bernstein, J. B., and Rakoff, A. E.: *Vaginal Infections, Infestations and Discharges*, New York, The Blakiston Company, Inc., 1953, p. 235. 2. Overstreet, E. W.: *Arizona M.* 10:383, 1953. 3. Schwartz, J.: *Obst. Gyn.*, N. Y. 7:312, 1956. 4. Crossen, R. J.: *Diseases of Women*, St. Louis, The C. V. Mosby Company, 1953, p. 292.

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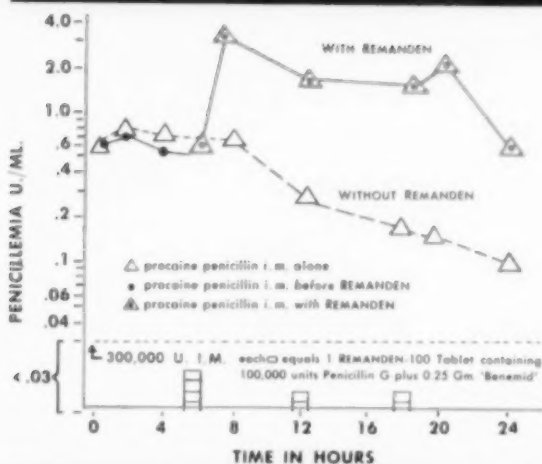
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